CAP COM	Gemini 7, would you place your antenna selector switch to adapter.
S/C/7	Roger. Houston, may I ask why. This is 7 here.
CAP COM	Trying to set up a possible better communication between your two vehicles.
S/C/7	The reason we went back to reentry was that we couldn't hear on adapter.
CAP COM	Roger, sounds very good now. How are you receiving us here?
S/C/7	You're on now.
CAP COM	'K. We're going to go over and pick up 6 now and monitor their burn. We'll come back to you.
S/C/7	O.K.
HOU FLT	Guaymas AFD
Guaymas	AFD Guaymas
HOU FLT	Send it before and after the burn.
Guaymas	O.k. Very good. We've got solid TM on 7. All systems are GO.
HOU FLT	Right.
California	California, remote to 6.
	California switching to 6.
	California on 6.
CAP COM	Gemini 6, Gemini 6, Houston. Standing by for your burn.
S/C/6	Roger, about three minutes to go now.
CAP COM	Roger.
S/C/6	(garbled) how about giving me a GMT (garbled) just to see how this clock is holding up.

CAP COM	Did you say GET or GMT?
S/C/6	(garbled)
CAP COM	GET, roger. We have 3 plus 00 mark 20 seconds.
S/C/6	O.K. need the Greenwich Mean Time.
CAP COM	Roger. Coming up on 1637...correction, 163800 mark. Did you copy 6?
S/C/6	Roger. We got that. Give me a log on 39, Elliot.
CAP COM	Roger.
S/C/6	I'm gaining on the GMT at least 40 seconds.
CAP COM	Roger. Coming up on 163900 ...Mark.
S/C/6	Roger. Cabin clock had gained 40 seconds. Will reset it.
CAP COM	Roger 6. Coming up on 1 minute to burn...Mark.
S/C/6	Roger.
Guaymas	All systems look good on spacecraft 6.
HOUSTON	Roger, Guaymas.
S/C/6	Stand by for burn. Mark. That was a bunch.
CAP COM	Nice tweek.
S/C/6	Garbled.
Guaymas	Looked good here, Flight.
HOU FLT	Roger, Guaymas.
S/C/6	(Garbled) right on schedule.
CAP COM	Roger.
HOU FLT	Texas, go remote on 6.
Texas	Texas remote 6.
HOU FLT	California local...California local

CAP COM — Have a flight plan update when you're ready to copy, 6.

S/C/6 — Good, Elliot.

CAP COM — Test rendezvous. You will obtain spacecraft 7 acquisition at 030500. Yaw 0, pitch 5.5 degrees up. Time of 248 nautical miles, 031500. Do you copy?

S/C/6 — Roger. For the test rendezvous, spacecraft 7 acquisition at 030500. Yaw 0, pitch 5.5. 248 nautical miles at 03 plus 15 plus 00.

CAP COM — Roger and of course that's pitch up. Also have a node update. Node at 053941. Rev 4, 112.2 degrees east, 082257 right ascention. Spacecraft 7 sunrise 054921.

S/C/6 — Roger, Give me the time for Rev 4 they're to start on.

CAP COM — The time for rev 4, the node update time is 053941.

S/C/6 — Roger. That's 05 plus 39 plus 41 rev 4 112.2 degrees east, 0822 plus 57 right ascention. Sunrise at 0512.

CAP COM — That's 054921.

S/C/6 — 05 plus 49 plus 21.

CAP COM — Roger. Gemini 6, your accelerometer bias still looks very good.

S/C/7 — Elliot, this is 7.

CAP COM — Gemini 6, going over to 7 for a few minutes. We'll be back to you with ... probably have an update here for you shortly.

S/C/6 Roger. Standing by.

CAP COM Gemini 7, Houston.

S/C/7 Go ahead, Houston.

CAP COM Just completed the second height adjust burn. Everything looks real good.

S/C/7 Thank you.

CAP COM Aren't keeping you guys very busy today, are we?

S/C/7 The friendly target vehicle is always standing by.

CAP COM Gemini 7, Houston. Did you copy any of our last transmissions with 6?

S/C/7 Negative.... Did you read me, Houston?

CAP COM Roger. Loud and clear.

S/C/6 Is Gemini 7 up on the transponder at this point?

CAP COM Say again 6.

S/C/6 Does Gemini 7 have their transponder on?

CAP COM That's affirmative.

S/C/6 Then they are BAF, is that correct?

CAP COM Roger... Did you copy them?

S/C/6 Only roger, I believe.

CAP COM That's right. He said roger.

S/C/6 O.k. We don't have a lock in. Probably need to get one shortly.

CAP COM Roger.

This is Gemini Control here. A little later in the pass across the states and we're still in touch, by the way. The 6 spacecraft is ...attempted to lock up with its radar on 7. They were in the proper alignment, but I don't think they achieved

a complete lock as yet. Here's how that conversation goes.

CAP COM	Gemini 6, Houston. We wonder if your suit temperature has improved since we went to tne secondary outlet. .
S/C/6	Affirmative. Stands at about 62 now.
CAP COM	Roger.
Antigua	Gemini 6 position Antigua.
CAP COM	Gemini 7, Houston. Could you give us a read-out on your stack currents?
S/C/7	Roger. Stand by.... 1A is 8, 1B 8, 1C 7, 2A 7 2B 6.5, 2C 9.
CAP COM	Roger. Where's Jim, out to lunch?
S/C/7	Not exactly, but he's busy.
CAP COM	Roger. We copy.

This is Gemini Control in Houston and that concluded the coversation thus far. They're still within range at Antigua, but we've had no discussion now for several minutes with either spacecraft. We'll stand by for... if there is anything, we'll come back to you.

END OF TAPE

This is Gemini Control Houston, we're three hours, 22 minutes into the flight of six. At the present time, the distance separating the two vehicles is approximately 230 nautical miles. Toward the tag end of that pass across the states down in the Antigua area, actually outside the Antigua circle on our big board here in the control center. Tom Stafford took an upadate from Elliot See on the circularization maneuver. Here's how it went.

HOU — LOS Grand Turk, Gemini 7.

HOU Cap COM — Gemini 6, Houston, have your NSR update if you're ready to copy.

S/C — Stand by.

HOU — LOS Grand Turk, Gemini 6.

S/C — Standing by 6 and ready to copy.

HOU CAP COM — Roger. GET is a burn 3 47 37; Delta V, 42.9; burn time 54 seconds; yaw zero; pitch down three degrees; co-ord 25 00 429; co-ord 26 000 23; co-ord 27 0; thrusters amped; maneuver posigrade down; Do you copy?

S/C — Roger. For NSR manuever. GET of burn 03 + 47 + 37; Delta V, 42 .9; duration 54 seconds; yaw zero; pitch down three degrees; co-ord 25 00 429; 26 000 23; 27 all zeros; thrusters amped; maneuver

posigrade down.

HOU CAP That's affirmative Gemini 6.

HOU LOS GT-7 Antigua.

LOS GT-6 Antigua.

END OF TAPE

GEMINI 7/6 MISSION COMMENTARY, 12/15/65, 11:09 a.m. Tape 467, Page 1

Gemini Control Houston here, 3 hours, 31 minutes into the flight of Spacecraft 6 and Spacecraft 7 presently shows 261 hours, 38 minutes. The separation distance between the two vehicles is presently 200 nautical miles. About 4 minutes ago Spacecraft 6 reported, the time locally was 1105 CST, Schirra reported he had established radar lock on with the Gemini 7 spacecraft. You recall during the swing across the eastern portion of the States, they began this attempt with Seven blunt end forward yawed around so that Six could see their transponder. They did lock on to it and it is a good solid lock. Here's some conversation now via the Ascention station.

AFD	12-1, put your UHF in remote and let me know when you have acquisition.
ASCENSION	Ascension AOS. Gemini 7 UHF remoted. Ascension AOS, Gemini 6, UHF remoted.
Houston Cap Com	Gemini 6, Houston, how do you read.
Spacecraft	Gemini 6
Cap Com	Have a slight update on your last maneuver. Are you ready to copy?
S/C 6	Yes.
C Com	The delta V is 42.5, duration 53 seconds, pitch is down 2 degrees, core 25 is 00425, core 26 is 00011, everything else is the same. Do you copy?
S/C 6	Roger. The delta V is 42.5, pitch is down 2 degrees, core 25 is 00425, 26 is 00011, Repeat, I have what looks like a postive lock on. Radar rate is 333 as described in the regular rendezvous mode separator dock.
Cap Com	Roger, Gemini 6. Understand radar lock on and renedzvous test is going good. The duration is 53 seconds. Do you copy?
S/C 6	Roger, the duration is 53 seconds, and again to verify the frame of 03 plus 47 plus 37.
Cap Comm	That is correct.
S/C 6	Roger.
S/C 7	Gemini 6, how do you read Gemini 7 now?
S/C 6	Loud and clear fellows, we are looking at Houston.
S/C 7	Very good, we are reading you loud and clear also.
S/C 6	Good, Frank. See you soon. We will be up there shortly.
S/C 7	Roger.

Com Gemini 6, Houston. Copy. You are looking at them, but I assume this means radar, you do not have visual. Can you confirm that?

S/C 6 Garbled.

Cap Com Roger.

This is Gemini Control Houston, you heard the tag end there that they have established not only radar lock on but they are communicating fluently now between each other. Their range something under 200 nautical miles. This is Gemini Control at 3 hours, 34 minutes into the mission of Gemini 6.

End of Tape

This is Gemini Control Houston, three hours, 52 minutes into the flight. At 11:25 local time spacecraft six began its circularization burn a burn of some 44 seconds, that was completed. There was some residuals left on their IVI's, they trimmed this up. We're advised now our orbit is approxiamtely 148 by 144 on six. This would put it very close to the desired 15 miles below the orbit of seven, which is being carried as 163 by 159. The two pilots are communicating now, much more easily. They've completed a radar lockon test very successfully and at three hours and 54 minutes into the flight, we show them about 150 miles -- make that 155 miles apart, as they move across the Indian Ocean. Here is the tape conversation of the burn that occurred east of Tananareve.

HOU Tananareve has telemetry acquisition.

S/C Tananareve this is Gemini 6 radar test appears to be valid. Over.

TAN Roger, copy, radar test is valid. Standing by for your burn.

S/C Roger.

S/C This is Gemini 7, there's no joy visual contact.

TAN Roger, understand, no joy visual contact.

HOU Gemini 6, Houston, coming up on NSR burn. Mark one minute.

S/C Roger. We'll start burn with 34% propellant quantity.

HOU Roger.

S/C It's starting to burn. Burning. ...(garbled)...

CU Did not copy, six.

S/C Pass the word there are no residuals

HOU Roger.

S/C Burn has been completed. There are no residuals.

HOU Roger, burn complete. No residuals. Do you have your OAMS quantity?

S/C 68% .

HOU Understand 68%. Is that correct?

END OF TAPE

This is Gemini Control Houston, 4 hours and 8 minutes into the flight of Gemini 6; 262 hours 16 minutes into the flight of 7. Over Carnarvon a few minutes ago, spacecraft 6 reported on the results of their circularization burn and here is how the conversation went.

Flight — Carnarvon Cap Com, Houston Flight.

Carnarvon — Houston Flight, Carnarvon. Go.

Flight — We want to make sure that both spacecraft have their HF antennas retracted.

Carnarvon — Roger, we have that Flight.

Flight — We want to tell spacecraft 7 that the cutoff for station keeping is 11 percent and under no circumstances are they to use the Aux tank.

Carnarvon — Roger, copy.

Flight — Also we want a PQI from spacecraft 6.

Carnarvon — Did I understand PQI?

Flight — Propellant quantity indicated.

Carnarvon — Rog.

Flight — That's flight control talk.

Carnarvon — Roger, yes sir.

Flight — Sorry about that.

Carnarvon — Rog.

S/C 7 — We can't tell if the acq lights are working or not Wally, we can't see them.

Carnarvon — Carnarvon has TM solid on spacecraft 7.

S/C 7 — We are turning off all the lights until you request them.

Carnarvon — Gemini 7, Carnarvon.

S/C 7 — Go ahead Carnarvon.

Carnarvon — I'd like to verify that your HF whip is retracted.

S/C 7 Roger.

Carnarvon Also I have a lot of instruction for you. Your fuel cutoff for station keeping is 11 percent. Under no circumstances are you to use the reserve tank. Did you copy.

S/C 7 I understand.

Carnarvon 7 is go on the ground, Flight. We have TM two solid.

Flight Roger.

Carnarvon Gemini 6, Carnarvon.

S/C 6 Go Carnarvon.

Carnarvon Roger. I'd also like to verify that your HF whip is retracted.

S/C 6 We have ours extended, we'll retract.

Carnarvon Rog. Also would like an OAMS propellant quantity please.

S/C 6 Roger, 68 percent.

Carnarvon Roger, copy. 68 percent.

S/C 6 There were no residuals.

Carnarvon Roger, copy.

S/C 6 We've had no joy with the dock and acq lights at this point.

Carnarvon Roger, copy. We have C-band track.

Flight Roger, you mean 6 don't you.

Carnarvon That's affirmed Flight.

S/C 6 Gemini 6, we are still about 154 miles out.

Carnarvon Roger. We are showing radar lock, Flight.

Flight That data agrees with ours, Carnarvon. You don't have to tell him that, but that agrees almost exactly with what we say he should be.

Carnarvon Roger. Did you copy no joy with the dock and acq lights.

Flight Rog.

S/C 7 Carnarvon, this is Gemini 7. Coming on with the hydrogen heater here, read about 49 480 on the pressure.

Carnarvon Roger, 7. We copy. Are your getting our summaries Flight?

Flight Say again.

Carnarvon Are you getting our summaries.

Flight Affirmative.

Carnarvon Flight, Carnarvon. On main bus 1 for GT-7, 21 amps, main bus 2 19 amps. 2A, 6.8, 2B, 6.0, 2 Charlie 6.2.

Flight Roger that.

S/C 6 ..... (garbled)

Flight What did he say?

Carnarvon I didn't copy that Flight.

Flight Something about 15 minutes after NSR was 7 hundred and something.

Carnarvon We'll have to get it off the tape Flight.

Flight Just OBC summaries please.

Carnarvon It's on its way. Flight, Carnarvon. We show on the JF03, the transponder temperature off scale high.

Flight That's on spacecraft 7?

Carnarvon That's affirmed.

Flight JF03 off scale high.

Carnarvon Affirmed. We've had LOS on both birds, Flight.

This is Gemini Control Houston. At 4 hours and 13 minutes into this 6 mission, we make the two spacecrafts out to be about 130 miles apart. We are meanwhile advised regarding Dr. Lovelace. The search for Dr. Lovelace the Chief of NASA Medical Programs at NASA Headquarters in Washington, a helicopter has spotted the wreckage of the Lovelace plane. It has been positively identified as the plane. A ground search party is moving on the wreckage. We have no estimate as to how long it will take them to reach the wreckage which is 1000 feet up on a mountain peak about 20 miles south of Aspin, Colorado. The helicopter reported no signs of life as it circled the area. We are getting additional reports in here from the Department of Defense and from the Federal Aviation Agency. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control Houston, four hours and 30 minutes into the flight of six. The two spacecraft are over Hawaii. Tom Stafford is doing most of the talking now. And he will probably continue to do most of the talking as he reads out the quantities he takes from his computer onboard. He just called us and said he shows a range now between the two crafts of about 100 nautical miles. Here's how the conversation is going over Hawaii.

HAW	Radar check on Gemini 6 at Hawaii.
HAW CAP COM	Gemini 7, Hawaii Cap Com.
S/C	This is 7, go ahead Hawaii.
HAW Cap Com	You're looking real good here on the ground. How are you doing?
/C	Doing fine pleased to say.
HAW CAP COM	Okay, I don't have anything for you. I'll be standing by.
S/C	Roger.
S/C	Hawaii, standing by for the data point.
HAW CAP COM	Say again.
S/C	Standing by for the data point.
HAW CAP COM	Who am I talking to?
S/C	Gemini 6.
HAW CAP COM	Okay, go ahead six.
	Gemini 6, Hawaii Cap Com.
/C	Stand by....

HOU FLIGHT Give you a data point there, stand by for it.

HAW CAP COM Roger.

S/C This is Gemini 6 at 35 40, we have a data point Theta 6.4 degrees; range 115.58; Delta V2 523; Delta V9 24.8; over point looks completely normal.

HAW CAP COM Say again the range.

S/C Range was 115.58.

HAW CAP COM We've copied all that, we're showing you go here on the ground. How are you doing?

S/C Very good here.

HAW CAP COM Okay, we're standing by.

HAW AFD Hawaii.

HOU FLIGHT Go ahead

HAW We've just lost our 12 18.

HOU FLIGHT Rog

HAW Seven, Hawaii, how do you read on this transmitter.

S/C Loud and clear

HAW Okay, six how do you read?

S/C Loud and clear.

HAW Flight, Hawaii.

HOU FLIGHT Go ahead.

HAW I think you can advise all sites they can go to a single transmitter antenna set up.

HOU FLIGHT	Roger
F [illegible]	And, we're showing radar lock.
HOU FLIGHT	Roger
S/C	Hawaii, Gemini 6, we're getting data point centered in exchange and/we'd like to know what kind of out of plane velocity we have.
HAW	Okay, stand by one.
S/C	Roger, we'll call you.
HAW	Flight, Hawaii.
HOUSTON FLIGHT	Still showing two feet per second as far as I know.
HAW	Okay. They claim six, they're still showing two feet per second, two feet per second.
S/C	Hawaii, Gemini 6, your data point 6.4 degrees 110.41 nautical miles. Delta V total 486.
HAW	Roger copy
S/C	That was ...(garble)... plus 39 minutes, 39 minutes 07.
HAW	I got all that. All systems still looking good flight.
HOU FLIGHT	Roger, Hawaii.
HAW	I'll tell you he's flat flying that thing, he's just as steady as can be.
HOU FLIGHT	Roger.

S/C Hawaii, did you get an answer to the out of plane yet?

HAW They're showing two feet per second.

S/C Outstanding.

HAW Roger.

S/C Good show down there, it's all up to us from now on.

HAW Theta 6.9; Range 107.82;

HOU FLIGHT Roger copy that.

HAW .....(garble) about 59 now. Working in real time.

HOU FLIGHT Good.

HAW 12 18 is now working, flight, and summaries are coming at you.

HOU FLIGHT Rog. Will you send us an A please?

HAW Roger. Los telemetry in Hawaii on seven.

HOU FLIGHT Roger.

HAW LOS telemetry of six and radar check on six.

END OF TAPE

This is Gemini Control, Houston, at 4 hours, 43 minutes into this dual mission flight. Tom Stafford continues to call out his range readings as he takes them of the computer. Here's the start of the conversation during the pass which is underway right now across the States.

...All systems LOS.

HOUSTON Roge. California, go remote for 6.

CALIFORNIA California remote.

GYM Guaymas has a solid TM on 7, and all systems are go.

HOUSTON Roger, Guaymas.

GYM We have solid TM on Gemini 6, and all systems are go.

S/C 6 Gemini 6 transmitting data point at 49 minutes. Data 8.0. R 94.82. Delta V total 396. Delta VI 185.6.

HOUSTON Roger, 6.

S/C 6 How's that plot looking, Elliot?

HOUSTON Your plot's looking real good. We concur with your points.

S/C 6 Roger. We've juggled a little bit. .....(Garble)...a little bit spunkier than we're used to seeing. We're going around the center point by plus or minus one or two degrees.

HOUSTON Roger. California local. Texas remote.

TEXAS Texas remote.

CALIFORNIA California local.

S/C 6 At this point, we've got so much sunlight in our eyes we couldn't possibly see Schmatze out front.

HOUSTON Roger, 6.

S/C 6 Both our windows are quite badly clouded.

HOUSTON Roger.

S/C 6 New data point at 50:40. Data 7.9. R 92.22. Delta V total 376. Delta VI 175.1. And, it looks like the closed lids are working good.

HOUSTON Roger, Tom. I have a terminal phase back up maneuver when you're ready to copy.

S/C 6 Stand by one, please. Ready to copy.

HOUSTON Terminal phase elapsed time, 1 plus 29 plus 17. GET of the burn 5 plus 16 plus 54. Delta V 33.0. Duration 41 seconds. Core 25, 00-301. Core 26, 90-135. Core 27, 00-016. Delta V's 32.9, 1.5, 1.5. Burn time 40 forward, 04 down, 04 left. Yaw 0. Pitch 26.8. Range 139. Range rate 32.69. Do you copy?

S/C 6 Roger. Terminal phase elapsed time, 1 plus 29 plus 17. GET of 05 plus 16 plus 54. Delta VT 33.0. Duration 41 seconds. Core 25, 00-301. 26, 90-135. 27, 00-016. Delta V....Stand by. I want to get a point here. I'll clear the rest up in just a second.

HOUSTON Roger, Tom.

S/C 6 Okay. Continuing on: 32.9; burn time 40 seconds forward, 1.5 for 04 seconds down; and 1.5 for 04 seconds to the left. Yaw 0. Pitch 26.8 degrees. Range 139. Range rate 32.69. And, on the range and range rates, I understand that's in yards. Range should probably be about 33 miles.

HOUSTON Gemini 6. We've got it just backwards here. It's range 32.69, and range rate 139, and the up down burn is down.

S/C 6 Roger. Up down burn is down.

HOUSTON Roger.

S/C 6 At this point in time, it would not be practical for us to either roll over or move in almost any direction to avoid sunlight. We have a white sky beneath us bright sun to our right.

HOUSTON Roge, 6. Gemini 7, Houston.

S/C 7 Go ahead, Houston.

HOUSTON Would you bump your hydrogen tank pressure to 500 pounds onboard gauge reading?

S/C 7 Roger. We already did. It's 505 now.

HOUSTON Roger.

S/C 7 And, our friend 3C is starting to drop off again.

HOUSTON Roger. Gemini 7, Houston. Have you done your fuel cell purge.

S/C 7 Negative. It's at 266 we're supposed to do that, I believe.

HOUSTON Gemini 7, Houston. You should have a fuel cell purge at this time.

S/C 7 Stand by, then.

This is Gemini Control, Houston. Shirra reports among other things that both windows are slightly cloudy in the Gemini 6 spacecraft. We hope it doesn't have any effect on those films that are to be taken in the rendezvous maneuver and during the look around of each other. Here's the rest of the conversation as we moved across the States.

S/C 7 Roger. Purging fuel cell.

HOUSTON Roger.

S/C 7 Elliot, if you're wearing a stop watch, you can give everybody a sinc. In about an even hour they should be in sight.

S/C 6 Roger. Data at 59 minutes was 10.0 degrees. Range 79.25. Delta V total 300.

ANTIGUA Acquisition GT-6, Antigua.

S/C 6 New data point data 10.7. Range 76.66.

HOUSTON Roger, 6.

END OF TAPE

The Rose Knot Victor parked off the east coast of South America calling out a new reading approximately every 100 seconds. Tom's last reading showed that the two were about 50 miles, 50 nautical miles apart which is coming right up on the design valued to begin the terminal phase initiation maneuver at an elapsed time of 5 hours, 18 minutes, 39 seconds. There may be a tolerance here of a minute or two for the values given here earlier. The indication it is possible that terminal phase may begin a little more than a minute late; however, all the values are coming up very close to expectation. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control Houston. According to our computations spacecraft 6 should have started its terminal phase maneuver - terminal phase initiate that is, a little over a minute ago. This would be a 33.7 foot per second burn and after that burn they should still have remaining onboard about 500 feet - 505 pounds of fuel remaining. Over the Rose Knot Victor or perhaps Ascension the transmission was quite garbled a few minutes ago. The controllers here think they heard Tom Stafford say that he had the spacecraft in sight, the 7 spacecraft with its blinking lights. At 12 o'clock high, the range at that time would have been about 50 miles. The range right now should be down on the order of 30 miles. We've had no conversation via Tananarive at this point and as Chris Kraft observed earlier, the ground has done all it can at this point through computations, it's all up to them now. We are standing by, we'll come back to you when we have additional information. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control Houston at 5 hours, 25 minutes into the flight. Gemini 7 and Gemini 6 are now about 25 miles apart. They're over Tananarive. We're listening to them via the Tananarive station, and most of the conversation is between Borman and Schirra. Borman apparently cannot see the acquisition lights on 6. Here's how the conversation is going.

HOUSTON	Tananarive go remote.
TAN	Tananarive remote. Tananarive has acquisition.
S/C 6	...are going along pretty well, Frank. Six o'clock in a few minutes.
S/C 7	Rog.
S/c 6	And we're approaching about thirty degrees, Frank.
S/C 7	Thirty.
S/C 6	There's twenty seconds to go to two minutes.
S/C 7	I*ll never make it.
S/C 7	I can't either.
S/C 6	Move it up to four, Frank.
S/C 7	Make it three minutes.
S/C 7	You say you're pitched down to thirty degrees now?
S/C 6	About 32.
S/C 7	Allright.
S/C 6	..... (garble)
S/C 6	How does it burn?

S/C 7 We can't see your acq lights. I hope they're working.

S/C 6 They give a very dim source up here, but I think they're working.

S/C 7 Can't see any flashing lights?

S/C 6 Negative. Frank has a green light so far. Hold that for 3 minutes with your circuit breaker.

S/C 7 Will do.

S/C 6 5, 4, 3, 2, 1. Mark. Three minutes.

S/C 7 Roger. Made it.

S/C 6 This is Gemini 6. Just a real dim light up there about 3 o'clock.

S/C 7 We're blinking again.

S/C 6 Roger. Go ahead.

S/C 7 It's off now.

S/C 6 OK. That was it.

S/C 7 It's coming on now.

S/C 6 Good. What do you see?

S/C 7 That we don't have any acq lights.

S/C 6 Don't think so. Frank, it's all yours.

S/C 7 We're about 35 degrees.

S/C 6 Roger.

TAN Tananarive has LOS.

MCC This is Gemini Control Houston. The time hack that you heard Tom Stafford make there was a reference to the start of his terminal phase initiation burn. The hack he gave was three minutes from the burn and this will be his time reference as they close on 7. As they move some four and a half miles a second swinging across the Indian Ocean, the pass is going to take them right up between the Carnarvon and the Coastal Sentry Quebec acquisition areas. We are hopeful that the Coastal Sentry will see and hear the rendezvous as they come very close together up, right about in the Philippines area. This is the waiting time, of course, and it's all up to them. We'll come back to you as soon as we have new information. This is Gemini Control at 5 hours, 29 minutes into the flight.

END OF TAPE

This is Gemini Control Houston. We have had no contact with either spacecraft since our last announcement. According to all our plots here, at this time the two should be 8 to 9 miles apart. We are very hopeful that the CSQ will be able to get a piece of this or at least the end of it as they come together. We just don't know yet. The line out there is very good today, and their acquisition has been good--good range on it. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control Houston. The coastal sentry, Quebec now is reading the telemetry signal from both spacecraft. They estimate the distance about 2500 feet, on the order of 5 miles, and that agrees very closely with our plots here. We are hopeful that they will get some voice communication as the two come very close together.

Its in the air. Wally Schirra has just advised that he is breaking a little bit. Thats the only part of the conversation that we can understand.

END OF TAPE

Wally Schirra has just advised that he is braking a little bit. That is the only part of the conversation that we can understand. We are standing by.

The CSQ says the conversation is way down, it's murky. We are having trouble copying it here.

The CS reads the range at 20,000 feet.

The CS reads 18,200 feet.

Elliott See advises that they have completed their final midcourse in this sweep up to the altitude of Gemini 7.

Charles Louis, the Manned Spacecraft Center Communicator out on the CS advises the range is now 15,000 feet.

We can hear Schirra coming up on the line every once in awhile, but the conversation might best be described as unreadable. It's just a surge on the line. Just from experience you can identify Wally's voice there, but nothing intelligable coming over it. I don't think the CSQ is reading it any better.

Flight Director here is asking for computer summaries from the CS every 30 seconds.

Now we hear Tom Stafford come through. He said the range is 1.7 miles.

Tom Stafford comes through again with 1.3 miles.

Houston here. They should be breaking into the sunlight. Chuck Louis out on the CS just advised us that we do have LOS, loss of signal there. We may get additional information from the range tracker, parked west of Hawaii.

Last reading we had from Tom was 1.3 miles. The ranges given to us by the Coastal Sentry were slightly larger than those given by Stafford.

The two spacecraft should be breaking into sunlight just about this time. Perhaps a minute or two ago.

This is Gemini Control Houston at 5 hours, 53 minutes, 54 minutes make it into the flight of Gemini 6, and we expect acquisition at Hawaii at 36 minutes after the hour. It is entirely possible that we will have communication with the Range Tracker which is also out on station at roughly the 180 degree parallel prior to that several minutes earlier. By all our estimates here the two should have gotten within say, 100 feet of each other at 5 hours and 50 minutes into the mission. That is what Elliott See called it, and we will have to just sweat out these next two minutes to find out how everything went because we, as we said earlier, the communication as we passed out there on the southern periphery of the CSQ was althougher murky. The one or two readable messages we got through there came from Tom Stafford calling the range in nautical miles. We heard him say 1.7, 1.3 and thats the last communication we had via CSQ. We are now attempting to get voice communication through the Range Tracker and we will stand by and come back to you when we have new information.

This is Gemini Control Houston. We have raised the 6 spacecraft. Over the Range Tracker Tom Stafford advised us in the calmest voice I think we have ever heard that they are 120 feet apart and sitting. 120 feet apart and sitting. Lets try to get some additional conversation from them. Right now there is a lot of rough air on the line but perhaps they will come back.

Garbled

S/C 6 This is Gemini 6. We have remaining about 50 percent.

Houston Cap Com Roger. Copy. Grams remaining 50 percent.

Hawaii Radar track, Gemini 6. Hawaii

Houston Flt Standing by, Hawaii.

This is Gemini Control Houston. They have taken down the tracker line now and when Tom Stafford came through with that reading of 120 feet and sitting, here in the Control Center everyone broke out an American flag and pinned up on his console. There must be fully 40 flags in this room now. Everyone is standing. Every room looking on this Mission Control Operations room is jammed with people. The floor itself has the usual number. Lets go back to Hawaii which has raised 6.

Houston Flt We copy.

Hawaii Cap Com OK

S/C 6	You guys are really a shaggy looking group with all those wire hanging out.
S/C 7	How about a trade for nothing. Where are they hanging from?
S/C 6	Frank, it looks like it comes out about the separation plane, might be the fibreglass, approximately 10 to 15 feet long.
S/C 7	The separation plane from the booster, right?
S/C 6	Affirmative.
S/C 7	Thats exactly where you have one too. It really belted around there when you were firing your thrusters. Looks about 8 or 9 feet long.
S/C 6	Looks about 8 or 9 feet long. Its a double wire.
S/C 7	Right.
S/C 6	We will try and take a picture of it.
Hawaii	Hawaii to Flt.
Houston Flt	We copy.
Hawaii	Do you want to go ahead with the flight plan update to each of them or do you want to hold off?
Houston Flt	Ask them if they are ready to copy?
Hawaii	7, Hawaii
S/C 7	Go ahead.
Hawaii	I have got a short flight plan update if you would like to copy it.
S/C 7	Stand by one. Go ahead, Hawaii.
Hawaii	OK. D-4, D-7, 2654300, sequence
Houston Flt	Don't forget the tape dump.
Hawaii	427
Houston Flt	Are you getting a tape dump?
Hawaii	Getting that, flight.
Houston Flt	Roger that.
Hawaii	I say again, sequence 427, mode 03. Spacecraft 6, 1 minute of recorder. D-4, D-7, 265 44 00, sequence 427, mode 01. Spacecraft 6, 2 minutes, note, to be performed during Gemini 6 tape playback at Hawaii. Did you copy that alright?
S/C 7	Roger.
Hawaii	Gemini 6, Hawaii

S/C 6	Go ahead, Hawaii.
Hawaii	I have an update for you if you are not too busy to copy yours. Short one.
S/C 6	All the time. OK Gemini 6 ready to copy.
Hawaii	OK. D-3, 063500, pass at Hawaii

END OF TAPE

HAW ... P8081800, pass at Hawaii, rev 5, that's it.

S/C 6 Roger, D8 at 06+35+00, pass at Hawaii, Rev 4, D8 08+10+00, pass at Hawaii, Rev 5.

HAW Okay very good. You got it.

Flight, Hawaii. They're both looking real good. We sent you some extra OBC's.

HAW Six and Seven, Hawaii. We'll be standing by if you have anything for us.

S/C 7 Roger.

S/C 6 There just seems to be a lot of traffic up here, that's all.

S/C 7 Call a policeman.

S/C 6 It's pretty exciting during the terminal run as we looked out we could see the two Gemini stars, Castor and Pollux, and they are off to the right of Gemini 6, correction, 7, they are all in a line.

HAW Roger.

Flight Could we have a - spacecraft 7 turn off their adapter C-band.

HAW 7, Hawaii, will you turn your adapter C-band off.

S/C 7 Roger.

HAW I turned to the command position.

Flight That's good.

HAW Okay, that will do it.

Flight, Hawaii.

Flight Go ahead, Hawaii.

HAW Okay, we're not having any trouble with radar interference. We're tracking 6 so he is in a good position on his beacon.

Flight Rog.

HAW He's in the catchup mode.

Flight Roger.

HAW He seems to be holding real steady. We're getting very little OAMS activity. And we have copied and completed the tape dump.

This is Gemini Control Houston. You heard Schirra and Borman discussing this incredible encounter in space over Hawaii there, joshing each other about the condition of their spacecraft. The flight plan calls for them to be performing an in-plane fly-around by Schirra. At this time he is to fly completely around the spacecraft and they are to maintain a distance of approximately 100 feet. They are talking to each other again, let's go back.

S/C 6 .... experiment on?

S/C 7 No, they should both be off now.

Flight Ask them what their range is now.

HAW 6, what's your range?

S/C 6 About 20 feet.

HAW Roger. 20 feet, Flight. And we have LOS all systems, both vehicles have LOS.

HAW WE DID IT!!

We apparently have lost signal now via Hawaii. The last message from there, I think, came from Ed Fendell, just a brief statement, "We did it." You heard Tom Stafford estimate the range at 20 feet just before we lost signal. As I said, the 6 is to perform a fly around maneuver, then spacecraft 7 is to take some thruster plume photographs of 6. They are to continue this station keeping at 100 feet. Within a very few minutes we should acquire from California.

Flight Director Chris Kraft here is asking Ellict See to ask the two to enlarge a bit on their description of the encounter. We are also getting some delta V information. Here is Elliot See calling telling the two that several million people are interested in how it went. Here it is.

S/C 6 — We initiated with a delta V that was 0 31 forward. It started initially as 00 7 up but decreased 00 4 up at initiation and right 001. At the completion of TPI we had 62 percent fuel remaining.

Cap Com — Roger.

S/C 6 — Stand by for the midcourses.
We have about 49 now, Elliot.

Cap Com — Roger, 49 percent now.

S/C 6 — That's affirmative. Our first midcourse was 00 7 forward, 00 5 left and 00 7 up. The final midcourse was 00 4 forward, 06 right and 00 3 up. This pretty much comfirms with the plot. We were a little bit below the nominal line there, on the plot at that time. And at braking we locked up 27 feet per second delta V with our braking, it was 27 feet per second aft, a total of about 14 left.

Cap Com — Roger, 27 feet per second aft and about 13 left.

S/C 6 — 14 left was the final one.

Cap Com — Roger.

S/C 6 — And when we were in position at 120 feet the (garbled)... we had indicated 50 percent fuel.

Cap Com — Roger, copy.

S/C 6 — Our docks all the way through looked fairly normal and the one backup solution that I did get for the midcourse ... (garbled) with the closed loop.

Cap Com — Rog, copied.

S/C 6 — Right now we are SEF, 7 is BEF, and I would say 10 feet apart.

S/C 6 — Rog, about 10 feet apart.

Cap Com — Say again your range 6.

S/C 6 — It's about 10 feet.

Cap Com — Roger.

S/C 7 — Houston, Gemini 7.

Cap Com — Go ahead.

S/C 7 — Roger, this fuel cell is dropping down again. Do you want us to take the platform off the line?

Cap Com — Stand by.

S/C 6 — ... (garbled) platform (garbled) ...

S/C 6 — I haven't studied it yet, Wally.

S/C 6 — Say again.

S/C 6 — I just alined the reticle on the horizon.

S/C 6 — Oh.

Cap Com — Gemini 7, Houston. We'd like to leave the platform on and take stack 2C off the line at this time.

S/C 7 — Stand by, Houston. Stack 2C is off the line.

Cap Com — Roger, and what was your current on it before you took it off?

S/C 7 — About $5\frac{1}{2}$ amps, it deteriorates from 10 to $5\frac{1}{2}$.

Cap Com — Roger 7. Gemini 7 and 6, would you continue with the description of your station keeping.

S/C 6 — Right now 6 is about 10 feet above and to the left of 7. We are just flying nose-to-nose approximately 16 feet apart.

Cap Com — Roger.

S/C 7 We can very clearly see the horizon scanners operate.

ap Com Roger, Jim. Gemini 7, are you able to see in the windows of 6 pretty easily and vice versa?

S/C 7 Roger, 7 can.

END OF TAPE

C/C 7 Wally, I figure lateral .....flying out about 40 feet, wo .....(garble).

HAW How are they doing?

We can't tell now, we're in too close to them during the breaking maneuver, we could see them quite a bit out.

S/C 6 I'll come back on the circuit nose to nose a little bit.

S/C 6 Looks like the wire off the guillotine of the booster and not of the blade of the spacecraft.

S/C 7 Yeah, you have got the same thing off in back of you.

S/C 6 The wire bundle looks good.

HAW Gemini 6, did I understand your report that thruster plumes were seen 40 feet out?

S/C 6 That was Gemini 7 and I'm sure he saw enough for we could see them ...(garble)...down with them.

HOU CAP COM Rog.

S/C 7 Houston, on his breaking maneuvers we could see his lateral fire quite a ways out.

HOU CAP Roger, 7.

I 'STON	Texas remote. Guaymas local.
TEX	Texas remote.
GYM	Guaymas local.
HOU CAP COM	Gemini 7, Houston.
S/C 7	Go ahead Houston.
HOU CAP COM	We plan to put 2C back on the line at the RKV.
S/C 7	Okay.
HOU CAP COM	It's approximately 20 minutes off the line.
S/C 7	Rog.
HOU CAP COM	Gemini 7, Houston, could you give us a read out on your stack times.
S/C 7	Stand by. Roger, Houston, 1A is 10½ amps, 1B is 11 amps, 1C 9½ amps, 2A 8½ amps, 2B 7½ amps and ...(garble)....is zero.
HOU CAP COM	Roger, Jim.
S/C 7	Open circuit voltage on 2 Charlie reads 31.2.
HOU CAP COM	Roger, copy 31.2. Looks very good 7, you might keep an eye on that 2 Charlie voltage and see if you can see it jump up like it did yesterday.
S/C 7	Roger.
HOU CAP COM	Gemini 7, will you switch your adapter C band to continuous?
S/C 7	Roger, C band continuous. It looks good.

HOU CAP COM Gemini 6, would you switch your adapter C band to command?

S/C 6 Gemini 6, adapter to command.

S/C 7 Like to see Hawaii?

S/C 6 It sure is a big deal.

S/C 7 HA, HA, HA.....(garble).... you're in style.

HOU CAP COM Gemini 6, Houston,

S/C 6 Go ahead Elliot.

HOU CAP COM On that update at Hawaii, those remarks of pass at Hawaii, rev 4 and rev 5, actually do not apply to you. Those were instructions to Hawaii.

This is Gemini Control Houston. We're now out of touch with those spacecraft as they swing down the west coast of Central America beginning a pass across South America. The Rose Knot Victor should raise them next. You heard in the last transmission that they were running somewhere between six to 10 feet apart. Apparently in good style and good comfort. One can certainly almost sense the feeling of achievement evident in this room, and in the back rooms that have supported this mission. You'll have to go back to the Alan Shepard flight, at least in my memory, to recall a time when all of the flight controllers were standing at their consoles at the moment when this rendezvous occurred and when we got that first report, There's a lot of hand shaking going on in the room now. Dr. Gilruth has come in and congratulating Chris Kraft. Dr. Shea, the head of the Apollo Program has come in the room. At 6 hours and 21 minutes into the flight, this Gemini Control Houston.

END OF TAPE

*Not aired on air/ground pass over CSQ, Hawaii.

HOUSTON CSQ Cap Com, Houston Flight. CSQ Cap Com, Houston Flight.

CSQ Houston Flight, CSQ. Go ahead.

HOUSTON Voice check. How do you read?

CSQ Loud and clear, Flight.

HOUSTON Roger. You also. Looks like you'll see it.

CSQ I hope so.

HOUSTON The rendezvous ought to take place just about the end of your pass.

CSQ Roger.

HOUSTON CSQ Cap Com, AFD. CSQ Cap Com, AFD. CSQ, CSQ, got our voice? CSQ Cap Com, AFD.

CSQ AFD, CSQ. Go ahead.

HOUSTON Okay. Just checking the com out there. I thought we lost you there for a minute.

CSQ I think we've lost the Kingsport.

HOUSTON Goddard concurs.

CSQ Well, it must have gone down to ...(Garble)...

HOUSTON Roger.

CSQ AFD, CSQ.

HOUSTON Go ahead, CSQ. Go ahead.

CSQ Roger. I've got one minor question. On the Spacecraft 7, BB03 and BB04, is there any reason to report either one if they do not change?

HOUSTON No. You don't have to worry about those.

CSQ Okay.

*Not aired on air/ground pass over CSQ, Hawaii.

HOUSTON We just want to make sure we hear what's going on there.

CSQ I'll have my transfer patched up.

HOUSTON Roge. Goddard, did you say we had lost the Kingsport?

GODDARD I think we've got it back, now, Frank. In fact, Flight, now; I think they lost receive at ...(Garble)... and Kingsport, but I think it's back in.

HOUSTON Roger that. Goddard concurs it's back. Momentary loss. Okay, thank you, voice control. You may tell them, voice control; if they don't give us this voice, we're not going to pay our bill.

GODDARD Roger. I understand, and concur.

HOUSTON You hear that Mr. Covington? CSQ Cap Com, AFD.

CSQ Come in. This is CSQ. Go ahead.

HOUSTON Okay. Just making a voice check on this circuit.

CSQ Loud and clear here.

HOUSTON Roger. You're loud and clear here also. A lot of people with bated breath here, CSQ.

CSQ We've got some here, too, Flight. We've got 1 minute, 10 seconds to assume that position.

HOUSTON We probably haven't got more than 100,000,000 people listening.

CSQ Roger. We have air/ground transfer. We have PCM solid with Spacecraft 7.

HOUSTON Roger that.

CSQ We have PCM solid on Spacecraft 6.

HOUSTON Roger that.

CSQ Seven is go. Six is go.

HOUSTON Can you give us range and range rate off your console?

*Not aired air/ground pass over CSQ, Hawaii.

CSQ	We have no range reading, Flight. That's ground.
HOUSTON	That's right. What's the range sight?
CSQ	25,000 feet, Flight, by meter. We have radar lock.
HOUSTON	Roger.
CSQ	He's at 20,400 feet.
HOUSTON	What's the range now?
CSQ	He switched from rendezvous to catch up on the computer.
HOUSTON	Say again.
CSQ	From rendezvous to catch up.
HOUSTON	Roge.
CSQ	18,200 feet.
HOUSTON	Roger. What's your range?
CSQ	He's at 15,000 feet, Flight.
HOUSTON	Roger.
CSQ	He's at 13,300.
HOUSTON	Keep cutting us some onboard computer summaries.
CSQ	Say again.
HOUSTON	Keep cutting onboard computer summaries.
CSQ	Roger. We are cutting them, Flight. One's already been sent.
HOUSTON	Send others.
CSQ	Roger.
HOUSTON	About every 30 seconds.
CSQ	Roger.
S/C 6	1.7 miles.
CSQ	He's at 10,600, Flight. Heard the spacecraft giving 1.7 miles.
HOUSTON	We copied the 1.7.
S/C 6	25 degrees and 1.3 miles.

*Not aired on pass over CSQ, Hawaii.

CSQ We've got LOS, Flight, on both birds.

HOUSTON Roger that.

CSQ I'll give you a read on range at our LOS.

HOUSTON Roger. Actually, the Range Tracker will be there, too, Cap Com.

CSQ Say again, Flight.

HOUSTON I said that we'd have the Range Tracker before we got to Hawaii.

CSQ Roger. We copied 8,890 feet at our LOS.

HOUSTON Say again. 8,000 and what?

CSQ 8,890. That number was about 30 seconds prior to LOS.

HOUSTON CSQ, would you send us an LOS main, if you have it?

CSQ Coming, Flight.

HOUSTON We'd like an LOS Alpha, also.

CSQ Wilco, Flight.

HOUSTON Range Tracker go remote, manual key if necessary. Gemini 6, Gemini 6, Houston Cap Com standing by. Roger. We're interested in your status. Gemini 6, Houston is standing by. Roger. Understand. Space and keeping at 120 feet. Roger. Copy. Ohms remaining 50%.

HAW We now track Gemini 6, Hawaii.

HOUSTON Standing by, Hawaii.

HAW We're showing you here on the ground. What are you reading on 2C at this time? Say again please.

S/C 6 A little over 5 amps.

HAW Roger. Gemini 6, Hawaii Cap Com.

S/C 6 Go ahead.

HAW Okay. We're showing you here on the ground. Can you give me a status?

*Not aired air/ground on pass over CSQ, Hawaii.

S/C 6 Yea. We're in formation with 7. Everything is go here.

HAW Roger. Congratulations. Excellent.

S/C 6 Thank you. It was a lot of fun.

HAW Flight, Hawaii.

HOUSTON We copy.

HAW Okay.

S/C 6 You guys are really a shoddy looking group with all those wires hanging around.

S/C 7 I'll trade you an omni. Where are they hanging from?

S/C 6 Well, Frank, it looks like it comes out at the separation plane. It might be the fiberglass. It's approximately 10 to 15 feet long.

S/C 7 The separation planes of the booster, right?

S/C 6 Affirmative.

S/C 7 That's exactly where you've got one, too. It really was snapping around there when you were firing your thrusters. Looks like about 8 or 9 feet long, and double wire.

S/C 6 Right.

S/C 7 Wait until I take a picture of it.

HAW Flight, Hawaii.

HOUSTON We copy.

HAW Do you want to go ahead with this flight plan update to each of them, or do you just want to hold off?

HOUSTON Ask them if they're ready to copy.

HAW Okay. Seven, Hawaii.

S/C 7 Go ahead.

*Not aired air/ground on pass over CSQ, Hawaii.

HAW I've got a short flight plan update, if you'd like to copy it.

S/C 7 Stand by. Go ahead, Hawaii.

HAW Okay. D-4, D-7, 265:43:00.

HOUSTON Don't forget the tape dump.

HAW Sequence 427.

HOUSTON Are you getting a tape dump?

HAW We're getting that, Flight.

HOUSTON Roger that.

HAW I say again, sequence 427. Mode 03. Spacecraft 6, one minute of recorder. D-4, D-7, 265:44:00. Sequence 427. Mode 01. Spacecraft 6 two minutes. Note: To be performed during Gemini 6 tape playback at Hawaii. Copy that alright?

S/C 7 Roger.

HAW Gemini 6, Hawaii.

S/C 6 Go ahead, Hawaii.

HAW I've got an update for you, if you're not too busy to copy. A short one.

S/C 6 Okay. Gemini 6 ready to copy.

HAW Okay. D-8, 06:35:00. Pass at Hawaii, rev. 4. D-8, 08:10:00. Pass at Hawaii, rev. 5. That's it.

S/C 6 Roger. D-8 at 06:35:00. Pass at Hawaii on rev. 4. D-8, 08:10:00. Pass at Hawaii on rev. 5.

HAW Okay. Very good. You've got them. Flight, Hawaii. They're both looking real good. We've sent you some extra ODC's. Seven, Hawaii. We'll be standing by if you have anything for us.

S/C 7 Roger.

*Not aired air/ground on pass over CSQ, Hawaii.

S/C 6 There just seems to be a lot of traffic up here, that's all.

S/C 7 Call a policeman.

S/C 6 We observed during the general run, as we looked out, we could see the two Gemini stars, Castor and Pollux, off to the right of Gemini 6...correction 7. They were all in a line.

HAW Roger.

HOUSTON Could we have Spacecraft 7 turn off their adapter C-Band?

HAW Roger. Seven, Hawaii. Would you turn your adapter C-Band off?

S/C 7 Roger. It's in the command position.

HOUSTON That's good.

HAW Okay. That will do it. Flight, Hawaii.

HOUSTON Go ahead, Hawaii.

HAW Okay. We're not having any trouble with radar interference. We're tracking 6, so he's in a good position on his beacon.

HOUSTON Roge.

HAW He's in the catch up mode.

HOUSTON Roger.

HAW He's holding real steady. We're getting very little OAMS activity. And, we have copied and completed the tape dump.

S/C 7 We've lost you 6.

S/C 6 You've lost sight of me, Frank.

S/C 7 Right.

S/C 6 I've got to burn here. It'll be a little bit.

S/C 7 Okay.

S/C 6 Tweek to your left. This is an Acq Light, isn't it?

* not aired air/ground on pass over CSQ, Hawaii.

S/C 7 Say again.

S/C 6 You can kill your Dock and Acq Light. It was in the experiment, wasn't it?

S/C 7 Well, they should both be off then.

HOUSTON Ask them what their range is now.

HAW Six, what's your range?

S/C 6 About 20 feet.

HAW Roger. 20 feet, Flight. And, we have LOS, all systems on both vehicles, Hawaii.

HOUSTON California go remote.

CALIFORNIA California remote.

END OF TAPE

Houston, This is Gemini 6, the Paul Revere.

This is Gemini Control Houston at 6 hours 43 minutes into the flight. Based on ground readouts, we are estimating here that Schirra and Stafford used 175 pounds of fuel to complete that rendezvous. That's a figure from the terminal phase initiation point on into the actual rendezvous point, some 6 to 10 feet apart. We show Spacecraft 6 with 365 pounds of fuel remaining. I want to emphasize that is a very conservative usage of fuel to achieve what those two achieved in that last 130 degrees from the southern tip of Africa to a point out over the western Pacific. We were prepared to expend at least twice that much in order to conduct that rendezvous attempt. Here now is some tape conversation of the two talking to each other, occasionally talking to the Rose Knot Victor off the south coast .... off the coast of South America.

RKV	Houston Flight RKV, voice check.
HOU FLT	Go ahead.
RKV	Roger.
HOU RKV	What did you say?
RKV	I was just having a voice check.
HOU FLT	Roger, read you loud and clear, how me?
RKV	Loud and clear.
S/6	Borman.
S/7	.....(Garble)..... on Saturday
S/6	How's the food supply holding out?
S/7	Oh, we're in good shape. It's holding out, but it's the same thing from day to day.
S/6	(Garble)
RKV	RKV has has telementry solid on both spacecraft.

HOU RKV	Roger RKV.
RKV	Gemini 7 RKV.
S/C/7	Go ahead RKV. Gemini 7.
RKV	Roger, we'd like for you to bring stack 3 back on the line.
S/C/7	Roger, back on.
RKV	Roger.
HOU FLIGHT	Did you get an open circuit voltage before they turn it on, please?
S/C/7	Look's like it's about the same before they turned it off.
RKV	Roger, what was your open circuit voltage before you turned it back on?
S/C/7	31.50
RKV	Say again.
HOU FLIGHT	31.5
S/C/7	31.50
RKV	Roger. What are you reading now? That's 2C current.
S/C/7	2 C current is reading 6 amps and closed circuit controllers a point below 25.
RKV	Roger. Now we're reading 5.5 on 2C fm.
S/C/7	....(Garble) RKV.
RKV	Say again Gemini 7.
S/C/7	I say we have company tonight..
RKV	You sure do. We'd like to know how you can see the arc lights on 6.

S/C7 They don't have any acq lights.

RKV They only have dock lights, thats all.

Kraft Did you see the dock lights?

RKV Did you Wally?

S/C 6 One time, way out.

RKV Roge, yeah . Wally, you couldn't see the lights on the final?

S/C 6 They looked good.

RKV OK. Gemini 6, have you been doing any in-plane flying around?

S/C 6 No, we're going into a night pass here and we'll do it after that.

RKV Roger. Flight, RKV.

Flight Go ahead

RKV Two C looks about 4.5 on the ground. Flight we'll give you another readout on 2C here shortly.

FLIGHT Roge .

RKV We're configuring the computer, it'll be a couple of minutes yet.

FLIGHT Roger

RKV They both got the GO flight, the radar's turned off on 6. 2C is holding at 4.5.

FLIGHT We'd like to have him take 2C off the line at 265 hours please.

RKV Roger. Gemini 7, we'd like you to take 2 Charlie off the line at 265 hours.

S/C 7 Roger. 2 Charlie off the line at 26500

RKV Roger, we'll give it a check at CSQ

S/C 7 OK

RKV Flight, did you copy on the acq lights?

Flight, RKV

FLIGHT Go ahead

Rkv Did you copy that on the acq lights?

FLIGHT Have you had LOS?

RKV Negative

FLIGHT Wait until you have LOS and then you can give us a full briefing on what they both said

RKV OK. Our computers are ready with 7 data

FLIGHT OK. Don't send it yet, we're not configured

RKV Roger

FLIGHT You put in your buffer and we'll let you know when we can use it

RKV Roger

S/C 7 Hey Wally,

S/C 6 Go ahead

S/C 7 When we do enter the next day cycle let us try it for a about 5 minutes will ya, the fuels stopped up a little bit

S/C 6 Sure/

S/C 7 OK. We might go to platform for the nighttime pass. Do you want to back off a little bit?

S/C 6 When we get in there you don't leave the platform up huh?

S/C 7 Yeah, we take over from the platform

S/C 6 OK

RKV RKV has LOS on both spacecraft.

END OF TAPE

This is Gemini Control Houston, at six hours, 57 minutes into the flight of 6. Seven has now logged 265 hours 5 minutes. In recent minutes we have confirmed that 7 did not see 6 acquisition lights, the acquisition beacons on the side of 6. Six, however, did see 7's lights. They advised that they picked up the lights at the terminal phase initiation point and could follow them right through, and they also said that the sun was a big help, gleaming on 7 adapter as they came into sunlight over the Pacific. They are presenting running about 20 feet apart, they are in conversation over Tananarive. They are using the docking light from 6 to illuminate the scene and they are also using 7's cabin lights. You can hear Jim Lovell ask Wally Schirra if he can see Frank Borman's beard and Wally says he certainly can, he can see Jim Lovell's beard even sharper though. There is also discussion on the line between the two of them about fire burning on the island of Madagascar below. One of them guesses that it is an oil fire, apparently they have seen it earlier. Let's have the conversation still running over Tananarive.

CAP COM Gemini 6, Gemini 6, Houston Cap Com, do you read?

S/C/6 Gemini 6 here, go ahead.

CAP COM Could you give us a report on your night station keeping.

S/C/6 We are about 20 feet apart, using the docking lights and the cabin lights of the spacecraft.

CAP COM Roger, understand no trouble at all, 20 feet apart

using the docking light on 6.

S/C/6 Using docking light 6 to eliminate 7.

CAP COM Roger, understand. Using docking light 6 to eliminate 7.

S/C/6 Don't you think that's the best way?

CAP COM Say Again?

S/S/6 Using the docking light?

CAP COM You that close?

S/S/6 I can see....(Garbled)

S/S/7 Can you see Frank's beard, Wally?

S/S/6 I can see yours better right now.

S/C 7 ... (garbled)...

S/C 6 Looks like your just wiped your mouth Jim, did you.

S/C 7 Yeah, right.

S/C 6 How's the visibility through these windows, they are pretty bad from this side.

S/C 7 Roger, it's pretty pad. We notice it particularly ... (garbled) at Sunset and we can barely see through the windows to see the opposite side, through your window, (garble) ....

S/C 6 Which side would they be on?

Cap Com Gemini 6, Houston. We'd like a report on whether you have done a fly around yet on the dayside.

S/C 6 Negative, we just left to get the ... (garbled)...

Cap Com Roger 6.

S/C 6 ..... (garble) We are satisfied to stay here as long as you let us. We have about 47 percent .. (garble) remaining at this time.

Cap Com Roger, 47 percent remaining.

S/C 6 Those forest fires really stick out don't they, Jim?

S/C 7 Roger, you can see them all the time, Wally.

S/C 6 Yes.

S/C 7 That fire right down there to your left is an oil fire, I think.

S/C 6 You see one ... (garbled).

S/C 7 Right, maybe down to your left, it has been there every night.

S/C 6 Well I'll be darn.

S/C 7 There's some thruster activity, what are you doing.

S/C 6 I'm taking a plot mode.

S/C 7 With your light on, Wally, I can just see the flame at the front of the nozzle.

Cap Com Gemini 7, Houston. Can you confirm you've turned 2 Charlie open circuit again.

S/C 7 This is 7, roger. 2 Charlie is open.

Cap Com Roger. What does the open circuit voltage look like.

S/C 7 It looks like about 31.2 volts.

Cap Com 31.6, roger.

S/C 7 31.2.

Cap Com 31.2.

S/C 6 It's ... (garbled).

S/C 7 Rog.

S/C 6 ... bluebeard you don't have much of a mustache.

S/C 7 Frank has Wally's ... (garbled)

S/C 6 (garbled)

S/C 7 Don't let them kid you. I'm just a blond.

S/C 6 Platform power up.

S/C 7 ..... (garbled) dock and get it over with.

S/C 7 Yeah, I sure wish we had a part of your fuel here.

S/C 6 We could work up a .... (garbled).

S/C 7 Right.

S/C 6 When your that close Frank, ... (garbled) ...

This is Gemini Control Houston. The conversation will continue in just a moment of two here now. Meanwhile just before CSQ on this pass, the 6 spacecraft will start its fly around maneuver, flying completely around 7. To date, they apparently have just jockeyed from side to side, looked seven over very carefully and this animated conversation continues.

S/C 7 It isn't apparently any shape of thruster firing, just a glob comes out.

S/C 6 ... (garble) the attitude one.

S/C 7 This close with the docking light on, that's all we could see is a ..... flame.

S/C 6 Okay, we'll ... (garble)...

S/C 7 But as you approached us in the rendezvous, we could see the fire way out for about 40 feet.

S/C 6 Very good.

S/C 7 We never even knew you were there Wally.

S/C 6 I could see your chin.

S/C 7 Now I can see a little more with the reflection off the cabin.

S/C 6 ... (garbled)..

S/C 7 No, I guess it's because I get so many reflections on the window.

S/C 7 I saw that little pen light.

S/C 6 I can (garbled) .....

S/C 7 ..... (garbled) .....

S/C 6 Very good.

S/C 7 ..... (garbled) dashlight.

Tananarive Tananarive has LOS.

END OF TAPE

This is Gemini Control. Our two spacecraft are now within voice range of the Coastal Sentry tracking ship and we'll tune in live now.

FLIGHT Another main, please.

CSQ Roger.

This is Gemini Control. Our two spacecraft are now within voice range of the Coastal Sentry tracking ship and we're standing by for their conversation. According to our flight plan, spacecraft 6 will be flying in out of plane fly around.

CSQ We have visual contact, Flight.

FLIGHT Roger. You see two of them?

CSQ (cut out because of S/C conversation)

S/C 7 Go ahead with the flight plan, Wally.

S/C 6 7 hours 22 minutes ..... events.

S/C 7 .....

S/C 6 Right. Go ahead. Switch to your experiment then we'll do the fly around.

S/C 7 OK. Then let us have about 5 minutes, enough time to move around in, then we'll be done.

S/C 6 Oh, fine.

S/C 7 How about that right now?

S/C 6 Sure. My maneuvering switch has been off for the last fifteen minutes.

S/C 7 OK, we'll just pull it around here and see what's on.

S/C 6 Very good.

S/C 7 This sternal was on for about 13 minutes this morning.

S/C 6 OK. Flight mode and no maneuvers.

S/C 7 ...it hasn't been used for eleven days.

S/C 6 Things look pretty good.

S/C 7 Yeah, those heaters work fine.

FLIGHT We'd like a cryo readout on spacecraft 6.

CSQ Cryo readout on spacecraft 6?

FLIGHT Yeah, you're right.

CSQ There doesn't seem to be any.

FLIGHT That's what I mean. There's not any. It looks like there's nothing there.

CSQ Yeah. A couple of ..... and that's about it.

FLIGHT Yeah.

CSQ Say again, Flight.

FLIGHT We'd like a cryo readout on spacecraft 6.

CSQ 51 TCM now. 51.

FLIGHT Say again, please.

CSQ 51, 51, TCM count.

FLIGHT On what?

CSQ Johnny Alpha zero 9 spacecraft 6.

FLIGHT Was he on ECS O_2?

CSQ .....shall we have him go to cryo?

FLIGHT Affirmative.

CSQ ....(garbled)... Too late, Flight. We have an LOS.

MCC This is Gemini Control. We were listening to live voice communications between our spacecraft and the Coastal Sentry. The conversation did not amount to a whole lot from the spacecraft. We did hear something between Mission Control and the Coastal Sentry. According to our flight plan, Gemini 6 was doing an out of plane station keep around Gemini 7 and they are now moving on over the Pacific. They are out of range with the tracking station at Coastal Sentry. Our next station contact will be made at Hawaii on this rev. Here in Mission Control Center we have had a change of shifts and the White team flight controllers have moved into the consoles and very shortly the Red team headed by our Flight Director, Christopher Kraft, will move over to our press building, Building 6, for a press conference. This is Gemini Control.

We are now 7 hours, 26 minutes into the flight of Gemini 6, the rendezvous flight, and for Gemini 7, the crew aboard Gemini 7, they have now been aloft 265 hours, 34 minutes. This is Gemini Control.

END OF TAPE

This is Gemini Control. As the spacecraft were passing out of range with the Coastal Sentry, out of voice range, we thought we had a LOS, but sure there will be no problem docking. Its easier than in the Gemini docking trainer." That was a last moment comment from Command Pilot Wally Schirra of Gemini 6 as they were conducting an out of plane station-keeping with Gemini 7 crew, spacecraft. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are now 9 hours and 25 minutes into the mission of Gemini 6, and we are 267 hours and 32 minutes into the mission of Gemini 7. At the present time, both spacecraft are passing over the Pacific Ocean on their way towards the South American Continent. We are in revolution 6 for Gemini 6 and revolution 167 for Gemini 7. Over the past two hours we have accumulated some voice tapes from the world wide NASA tracking network and at this time we will playback the voice communication between the two spacecrafts and the Hawaii tracking station on revolution 5 and revolution 166, respectively.

Flight — Roger, Hawaii.

Hawaii — Gemini 7, Hawaii Cap Com.

S/C 7 — Go ahead Hawaii, Gemini 7.

Hawaii — How are you doing?

S/C 7 — It's great. Really outstanding.

Hawaii — Okay. Give me a readout on 2 Charlie please.

S/C 7 — Roger, 2 Charlie closed circuit is reading 24.8.

Hawaii — Roger.

S/C 7 — And the amps are a little over 5. $5\frac{1}{2}$.

Hawaii — Roger, very good.

S/C 7 — Hawaii, this is 7 here. We are going to power down the platform unless Flight has some objections and get back on the regular schedule and leave the spacecraft in horizon scan.

Flight — Roger, we concur on that Hawaii. We were kicking it around back here.

Hawaii — Okay. They say have at it.

S/C 7 — Thank you.

Hawaii — Okay, Gemini 6. Will you put your quantity read switch to ECS O_2 position.

S/C 6 We've done it.

awaii Okay.

S/C 6 We are going to do the in-plane flying around maneuver very shortly.

Hawaii Roger. Going to start a tape dump now.

S/C 6 Roger.

Hawaii We're ready to dump.

Flight Hawaii Cap Com, Houston Flight.

Hawaii Flight, Hawaii Cap Com.

Flight Roger, if possible, if they haven't started powering down yet, we'd like to do a purge before they power down.

Hawaii Okay.

S/C 6 There is the DCS light.

Hawaii Okay, I'll give you a TX. 7 Hawaii. Gemini 7, Hawaii Cap Com.

/C 7 This is 7, go.

Hawaii If you haven't started powering down yet, they want to schedule a purge, Jim.

S/C 7 Okay, we have not started, so we will go ahead and purge.

Hawaii Okay, hold up a second.

Flight Go ahead.

Hawaii Okay. Okay, we are ready for your purge. Have at it.

S/C 7 Purging section 1.

Hawaii Roger.

S/C 7 ..... (garbled) ..... Boy, those windows are really bad. I can get a good look at your window, Wally, it's really coated.

S/C 6 Yeah.

light Hawaii Cap Com, Houston Flight.

Hawaii Flight, Hawaii.

Flight Roger, we'd like him to stay powered up for approximately 15 minutes after the purge. Then they can power down.

Hawaii Roger.

S/C 6 Looks like you have a big problem there.

S/C 7 Wally, can you tell if we are sending at all?

S/C 6 Say again.

S/C 7 Can you tell us if we are sending at all.

S/C 6 I see some white flakes, bubbles, and things come out. Mostly bubbles . . garbled

S/C 7 Can you push down a little to be more in line with us?

S/C 6 Do it right now.

Hawaii 6 quantity read switch to OFF.

/C 6 Roger, it's off.

Hawaii 7 put your quantity read switch to ECS O_2 position. Okay, just leave it there please.

S/C 7 All right.

Flight Hawaii Cap Com, Houston, Flight.

Hawaii Flight, Hawaii Cap Com.

Flight Roger, as soon as he finishes the purge will you advise him we want him to stay powered up for approximately 15 minutes. That would be an elapsed time of approximately 2 . . .

Hawaii 266:01

Flight That's exactly what I was going to give you.

Hawaii Okay. 7, Hawaii. Go to fuel cell O_2 position on your quantity read.

S/C 7 Now?

Hawaii Okay, just hold it there and we'd like you to stay up for

about 15 minutes on the power up and hold off on your power down till 266 plus 01.

S/C 7 — 266 plus zero 1, roger.

HAW — Okay. Quantity read to the fuel cell H_2 position, please 7.

S/C 7 — There you are.

HAW — Okay. Flight, Hawaii Cap Com.

Flight — Go Hawaii.

HAW — ECS O_2 on Gemini 6 is reading from 171 to 172 PCM counts and we have completed the tape dump on 6.

Flight — Roger.

HAW — 7, Hawaii, quantity read switch OFF.

S/C 7 — Okay, thank you. We've been leaving it in the ECS O_2, you you want it off tonight.

HAW — Say again.

S/C 7 — We've been leaving it in the fuel cell O_2 because that . . garbled . ., you want me to turn it off tonight though?

HAW — Okay, they'll give you a good briefing before you go to bed. If you don't mind you can leave it in the O_2 position now.

S/C 7 — Okay. I don't care. I'll leave it on.

HAW — Roger.

6, we're finished with the experiment. 6 Hawaii.

S/C 6 — Go ahead Hawaii.

HAW — We've got nothing else for you here. Do you need anything?

S/C 6 — . . garbled . . power down right now.

HAW — Roger, we'll be standing by.

S/C 6 . . garbled about 46 percent prop quantity.

HAW Say again your prop quantity, 46 percent.

S/C 6 That's correct.

HAW Okay thank you.

S/C 7 Hawaii, for your information, 7 is terminating here with about 11 percent.

HAW Thank you 7.

Flight Give me those numbers again, Ed.

HAW Okay, Flight. Gemini 6 OAMS prop quantity 46 percent.

S/C 7 Hawaii, Purge complete.

HAW Roger, we've got the whole thing, thank you very much. And Gemini 7 is terminating. He's at his cut-off point at 11 percent. One One percent.

Flight Okay, give me the numbers again on 6.

AW . . garbled ..

Flight No, he's starting his end flame fly around at what quantity did he say.

HAW 46.

Flight Got it.

HAW And the other one is terminating his fly-around bit at the cut-off, 11 percent.

Flight Roger. Okay and let's have an LOS main on 7.

HAW Roger. 7,Hawaii. We've got nothing further, we'll be standing by if you need anything.

S/C 7 Thank you. Our 2 Charlie in second section looks sick again tonight.

HAW We'll see what's going to happen. Just hang in there.

Flight Do you still see JF02 still sweeping on 7.

HAW Say again flight.

Flight Do you still have JF02 on Gemini 7

S/C 7 Over the top Hawaii.

HAW Yea, Frank.

S/C 7 Okay.

Doctor, about the experiment back of Jim's head. It's all clay like an . . garbled . . or something came out on it.

Doctor That's a liquid freon, or neon from the cold IR experiment.

S/C 7 O, is that what it is?

Doctor Yea.

W Flight Hawaii, JF Julie at Foxtrox at 02 is holding right at zero.

Flight Roger.

HAW Did you get what he said about the cold IR.

Flight No.

HAW I didn't get it either.

Flight Don't sweat it.

HAW We've got LOS on all systems at Hawaii.

Flight Roger, Hawaii. Busy pass.

HAW Well that's what we get paid for.

Flight Yea.

HAW That's what makes it good.

A few minutes later as the spacecraft passed over the Rose ot tracking ship on revolution 6 and 167, we had further communication and here is the taped playback.

RKV Gemini 7, RKV Cap Com.

S/C 7 Go ahead RKV, Gemini 7

RKV I've got a block update for you whenever you are ready.

S/C 7 Listen, I want to talk to you about one thing first.

RKV Okay.

S/C 7 Our suits were powered up for quite awhile now and I went to take my harness off and I'm getting water out of the suit inlet hose in great quantities and we notice now that out suit temperature is below 40 degrees.

RKV Roger.

S/C 7 We put the B pump on we've turned the heat exchanger to warm but we're still awfully cold . . garbled.

V Roger. You copy flight?

Flight Affirmative.

RKV Roger. Ready to copy this block update.

S/C 7 Ready to copy.

RKV Okay. REP 400 K to all areas, 21 plus 4 zero. Area 169-3, 2690908; Area 170-5, 2712532; 171 delta, 272 23 14; 172-2 373 58 00; 173-2 275 31 30; 174-2, 277 47 04; 175-1, 278 36 05; 176-1, 280 11 41; the weather in area 69-3 is marginal and also the weather in 173-2 is marginal. The weather in all other areas is good.

S/C 7 Thank you.

RKV Flight, RKV

Flight Stand by RKV. We are checking E COM.

RKV Cap Com, Houston Flight.

RKV Okay the Charlie Charlie zero three the latitude inlet air temp is awfully high. That TM's affirmative.

Flight Roger.

RKV Gemini 6, you'll get your block update over CSQ.

S/C 6 . . garbled . .

RKV Are you powered down Flight, that's Gemini 7?

Flight RKV Cap Com, Houston Flight.

RKV Go ahead flight.

Flight Roger. Will you ask 7 if at any time he has seen an evaporator pressure light.

RKV Roger. We'll be dumping in approximately 2 minutes 6.

S/C Roger, could you hod off on that for one minute?

RKV Sure can.

RKV Gemini 7, RKV.

S/C 7 Okay.

RKV Have you at any time seen an evaporator pressure light?

S/C 7 . . garbled.

RKV Is that negative?

S/C 7 Negative, we have not seen one.

RKV Rog. Did you copy Flight?

Flight Affirmative. RKV Cap Com, Houston Flight.

RKV Go ahead Flight.

Flight Roger, we've looked at all of the data. His systems seem to be running normal. We feel that his water that is condensed in the hose - we would like to recommend that he go to

primary and secondary heat pumps and turn both suit bands on.

RKV Repeat Flight. The crew was talking.

END OF TAPE

HOUSTON Okay. We'd like to have them go to B pumps in both the primary and secondary loop, and turn both suit fans on.

RKV Okay. They've got the B pumps in both loops on now.

HOUSTON Okay. Just have them turn both suit fans on.

RKV Roger. Gemini 7, RKV.

S/C 7 Go ahead.

RKV We'd like you to turn both suit fans on at this time.

S/C 7 Roger. Both suit fans.

RKV And we'd like for you to leave pump B up in both loops.

S/C 7 Roger. Pump B is on and pump A is off in both loops.

RKV Right.

HOUSTON You should have told them that we think the systems operating good.

S/C 7 Both suit fans on.

RKV Roger. Flight?

HOUSTON Too late.

RKV We've had LOS with both, Flight.

HOUSTON Okay.

The next voice communication took place over Tananarive Tracking Station. We are still now in revolutions 6 and 167, respectively.

HOUSTON Gemini 7, Gemini 7, Houston Cap Com. Over.

S/C 7 Go ahead. Gemini 7 here.

HOUSTON Roger. How's the water now?

S/C 7 Well, I still can't decide, Elliot. The suit temperature's below forty. The water's really no problem. It's going into the suit. But, I'm concerned about the canister.

HOUSTON Understand you're concerned more about the temp than you are the water.

S/C 7 No, the canister. The reason, I thought .....

CAP COM Gemini 7, Gemini 7, Houston Cap Com. We evaluated your systems pretty thoroughly on the ground last pass over the RKV, and they all look good from here..We believe the water is due to condensation in the hose. And we'd like you to stay in your same configuration. The suit fan should blow that water out.

S/C7 Okay. Why do you have such a low temperature - suit temperature?

CAP COM Gemini 7, Gemini 7, could you give us that temperature - that onboard temperature.reading, please?

S/C 7 Roger. It's off-scale low, below 40 degrees.

....(garbled)

CAP COM Okay.

HAW ..... still show 60 degrees.

S/C Roger .....

CAP COM Gemini 7, Gemini 7, Houston Cap Com. I've got a D-4/D-7 update. for you during the spacecraft 6 separation burn.

S/C 7 Roger.

.....

CAP COM Gemini 7, Gemini 7, Houston. You're breaking up badly. I've got a D-4/D-7 update if you're ready to copy.

S/C 7 Roger. Go ahead.

CAP COM Okay. D-4/D-7 at 267 51 23. Sequence 430, Mode 03. This is on spacecraft 6 during spacecraft 6 separation burn. Gemini 7, Houston. We plan on taking you = getting you back out of your suits after the completion of the separation burn.

S/C 7 We probably think we'll just go ahead and stay in 'em until reentry, Gene.

CAP COM You say you'd rather stay in them until reentry?

S/C 7 Roger. Yes, we think instead of getting in and out of 'em we might as well stay in them until reentry. It's only .....

CAP COM Okay. We understand that, but if you so desire, after the separation burn you can get out of them.

S/C 7 Okay. Fine, thank you.

CAP COM Gemini 6, this Houston.

S/C 6 This is 6 . . .. . loud and clear.

CAP COM Roger, Gemini 6. You'll get your PLA updates over the CSQ on this rev. If you can copy.

S/C 6 We don't want to press you ..... for one more orbit, over.

CAP COM Understand you'd rather wait one full more orbit. Is that correct?

S/C 6 ..... one more orbit, over.

CAP COM Okay. We'll hold it off another orbit.

S/C 6 Thank you.

.....(garbled from 6)

CAP COM Gemini 7, Gemini 7, Houston.

S/C 7 Go ahead Gene. This is Gemini 7.

CAP COM Roger, Frank. We'd like you to get a cabin temperature survey and report it over the CSQ.

S/C 7 Right.

CAP COM Gemini 7, Gemini 7, Houston. Can you give us an idea of the quantity of water you're talking about. Is it dripping out or is it actually streaming out?

S/C 7 Well, when you take your hoses out it's pretty much streaming out, however, it's stopped now.

CAP COM Understand it was streaming out but it's gone now. Is that correct?

S/C 7 Roger. It's stopping now.

CAP COM Okay.

S/C 7 What is your ground readout of our suit inlet temperature?

CAP COM Gemini 7, Houston. We've got the right suit inlet temperature in about 55 degrees.

S/C 7 You must have a gage ..... then.

CAP COM Gemini 7, Houston. It's possible that we've got some water in that gage onboard.

S/C 7 Roger. I think that's what happened.

CAP COM Are you uncomfortably cold at this time?

S/C 7 We're all right. We've got both suit pants on.

CAP COM Roger. Understand.

The next communication with spacecrafts 6 and 7 took place over the Coastal Sentry Tracking Ship and we will now play back that tape.

CSQ Gemini 7, CSQ Cap Com.

S/C 7 Go ahead, CSQ, 7 here.

CSQ Okay. Could we have a result of your cabin temp survey?

S/C 7 Rog. Stand by one.

The cabin temperature in the Command Pilot's area is 80 with dew point of 67. The hatches are running about 80 to 79. And in between the seats it's 79 with a dew point of 74. So ..... in the cockpit is 80 with a dew point of 67.

CSQ Would you repeat your readings between seats.

S/C 7 79 ambient, 74 dew point.

CSQ Flight, did you copy that?

S/C 7 ..... got a little wet. It may have been reading high, but when we came back to these others it was right around 68 degrees.

FLIGHT Roger. We read that CSQ.

CSQ Okay. We want to keep both ..... on and both suit pants on. We think it's condensation in the suit, and we'll check further.

S/C 7 Okay. Thank you. ..... suit inlet temperature gage is evidentally off-line, also.

CSQ Roger. Our left suit reading is pretty erratic. It's running between 55 and then 70, normally.

S/C 7 Okay. Our gage is off-scale low, below 40 degrees, and it's not that cold.

CSQ Roger.

Flight, CSQ. The right suit inlet temp on the ground is 58.5 and stable. The left suit reading we have on the ground appears to be erratic.

FLIGHT Okay. In your summary it's indicating 65.

CSQ You just happened to catch it at that point. Did you go on anywhere from, well it's got a light range here, 50 to 80.

FLIGHT Roger.

Both spacecrafts GO there, CSQ?

CSQ Say again, flight.

FLIGHT Are both spacecrafts GO?

CSQ They are both GO.

FLIGHT Roger.

CSQ Flight. You copy all the readings he read on the temp survey?

'LIGHT You can put 'em in your post-pass, Chuck.

CSQ Okay. It'll be a little late. I'll have to make a tape playback. I missed a couple of 'em.

FLIGHT Okay. We'll wait for 'em.

CSQ Cap Com, Houston flight.

CSQ Go ahead, flight.

FLIGHT Roger. We'd like a couple of side-wall temperature measurements from spacecraft 7. That's actual contact with the wall.

CSQ Actual contact with the walls, both sides?

FLIGHT That's right.

CSQ Okay.

Gemini 7, CSQ. We'd like a couple more points on your temperature surey. We'd like a reading of both walls, both sides of the spacecraft, against the wall.

S/C 7 Roger, I made that.

CSQ Okay. I guess I didn't copy those, would you repeat those.

FLIGHT We'll pick 'em up over Hawaii.

S/C 7 Roger. Those are the - right by our heads on the hatches. 80 degrees.

CSQ Okay.

Did you copy that, flight?

FLIGHT Affirmative.

S/C 7 You can turn your parking light off, 6.

S/C 6 Gemini 7, this is 6. If you can hold it in the yaw for just a little while, we'll try to get in real close and try to get all these close shots..

END OF TAPE

S/C 7 Try to get in real close and get all these close shots.

CSQ LOS flight on both vehicles.

HOU Roger, CSQ

The next taped voice conversation took place over the Hawaiian tracking station and we will now play back that tape.

HAW Cap Com We have solid both vehicles at Hawaii.

HAW Gemini 6, Hawaii Cap Com.

S/C 6 .....(garble)..

HAW Cap Com How are you doing?

S/C 6 Very good, we're getting a whole batch of movies.

CAP COM That's great, we'll be glad to see those. We show you go here on the ground and I've got a set maneuver update when you're ready to copy.

S/C 6 Okay, stand by.

HAW CAP COM Hawaii, are you ready to copy?

S/C 6 Stand by.

HAW CAP COM Both looking real good flight.

S/C 6 Ready to copy.

HAW CAP COM Okay, GET B 9 44 00; Delta V 9 feet per second; burn time zero + 15; yaw and pitch are zero; co-ord 25 9 00 90; Co-ord 26 and 27 are all zero; foreward firing thrusters a retrograde maneuver, this is your set maneuver.

S/C 6 Roger, for separation burn B 9 + 44 +00; Delta V 9.0 duration Zero ± 15; yaw zero; pitch zero; co-ord 25 9 00 90, 26 and 27 with all zeros; thruster forward firing/a retrograde maneuver.

HAW CAP COM You sound very good. Stand by one I want to get seven. Gemini 7, Hawaii Cap Com.

S/C 7 Go ahead.

HAW CAP COM Okay, we're showing you go, how are you doing?

S/C 6 Fine.

HAW CAP COM Okay, I've got a flight plan update if you'd like to copy it.

S/C 6 Roger, we're ready.

HAW CAP COM Okay, 268 + 30 + 00. Begin exercise, housekeeping and eat period.

S/C 6 Roger.

HAW CAP COM 270, 11 43, crew status report on the pilot. 270, 20 00. Your sleep period begins CSQ LOS. 279 47 46, this will be a fuel purge after awakening at Carnarvon and it will be revolution 175. And the last item 280 48 00 biomed recorder to the off position.

S/C 6 Roger, Hawaii, is the D-4/D-7 update still valid?

HAW CAP COM Okay, I've got a D-4/D-7 time of 267 51 23. That's still valid.

S/C 6 Roger, understand, biomed number 2 off at 280 48 00. Is that correct.

HAW CAP COM 280 48 00.

S/C 6 Roger understand.

HAW CAP COM Okay, very good

Seven and six Hawaii will be standing by. We've got about another four or five minutes here.

S/C 6 Hawaii, Gemini 6. Hawaii Cap Com, Gemini 6.

HAW CAP COM Gemini 6, Hawaii Cap Com.

S/C 6 Roger, we asked for another orbit for photography. There seems to be no reason to.....off that.

HAW CAP COM Okay, Wally stand by one.

S/C 6 Okay.

HAW Flight to Hawaii.

HOU FLIGHT Roger, Hawaii.

HAW He wants to hang on another orbit on this rendezvous thing and then separate.

HOU FLIGHT Okay, we concur.

HAW Okay, I'll scrub the set maneuver.

HOU FLIGHT Roger, we didn't understand his request over Tananareve.

HAW Okay, very good. Gemini 6, Hawaii.

S/C 6 Go ahead.

HAW CAP COM All that I just gave you you can scrub it out. They're giving you a go for another rev.

S/C 6 Okay, very good.

We have about 41% fuel remaining, over.

HAW CAP COM Roger, I copy that.

S/C 7 Hawaii, 7.

HAW CAP COM Go ahead 7.

S/C 7 You can tell it looks pretty thick again, spread the amps are about six now, 6 on one carrying....(garble)... 2 Charlie about 2 amps 2 Baker about 2½ and 2 Able about 2½.

HAW CAP COM Okay, let me make sure I've got this right. 2 Charlie 2. 2 Baker 2½. 2 Alta 2½.

S/C 7 Roger.

HOU FLIGHT Hawaii Cap Com, Houston Flight.

HAW CAP COM Go ahead, Flight.

HOU FLIGHT Roger. We'd like Spacecraft 7 to give us a relative humidity at the suit outlet hoses.

HAW CAP COM OK. 7, Hawaii.

S/C 7 Go ahead.

HAW CAP COM Can you give me the relative humidity at the suit outlet hoses.

S/C 7 Roger. Stand by.

HOU FLIGHT If they don't get it, we can get it over the RKV this rev.

CAP COM	OK. I've got three minutes. I'll continue the tape dump.
HOU FLIGHT	OK.
S/C 7	Do you need the suit inlet hoses, Hawaii?
HAW CAP COM	You mean the suit outlets, don't you?
S/C 7	We're back in -- we're in the suits. We can't give you the humidity at the suit outlet hose.
HAW CAP COM	OK. Give us the inlet.
S/C 7	OK. It's spitting water. We'll try it.
HAW CAP COM	OK. 7, Hawaii.
S/C 7	Roger.
HAW CAP COM	OK. If I don't get that data, pass it on to the RKV.
S/C 7	We're reading 70 and 64. 70 temperature. 64 dew point, Hawaii.
HAW CAP COM	OK. I got that. Thank you. Copy that, Flight?
HOU FLIGHT	Affirmative.
HAW CAP COM	OK. ..... LOS both vehicles at Hawaii. C-band LOS.
HOU FLIGHT	Roger, Hawaii.
Chop	That was the taped voice communication between the Hawaiian tracking station on revolution 6

and revolution 167 respectively; and since that time, we -- our two spacecraft have moved on over to revolution 7 for Gemini 6 and revolution 168 for Gemini 7. They have passed within voice communication range of the Rose Knot tracking ship. They are at present moving out over the South Atlantic and to bring you up to date to the minute, we will now play back the taped communication between the spacecraft and the Rose Knot tracking ship.

R CAP COM Gemini 7, RKV Cap Com.

S/C 7 7. Go.

RKV CAP COM Roger. Will you give me an onboard propellant quantity.

S/C 7 Roger. We are 11%.

RKV CAP COM Roger. Gemini 6, we'd also like your prop quantity from you.

S/C 6 Roger. 40.

RKV CAP COM Roger. Gemini 7, on your water problem -- we feel there is a possibility that the water has backed up from the water boiler into your

suit heat exchanger, and we've come up with a little procedure we'd like you to run. We feel it's pretty safe, and it will eliminate about eight pounds of water in the shortest possible time. Let me know when you're ready to copy.

S/C 7 Roger. Ready to copy.

RKV CAP COM OK. The time of 268 plus 33, we'd like you to turn the primary and secondary A pumps on and turn off the primary and secondary B pumps. We'd like you to orient the spacecraft broadside to the sun, and initiate a 10° per second roll rate. We'd like you to maintain that broadside orientation while you're rolling. Then we'd like you to select the radiator to bypass. Did you get all that?

S/C 7 OK. Primary and secondary A pumps on. Turn off the B primary and secondary pumps. Get spacecraft broadside to the sun and initiate a 10° roll rate. Does that check?

RKV CAP COM That's affirm. We then would like you to select the radiator to bypass, and at a

time of 268 plus 37, we'd like you to place the evaporator heater switch to ON. At 268 plus 41, select the radiator to SLOW. At 268 plus 42, turn the evaporator heater switch to OFF. Turn your primary A pump off, your primary B pump on. Turn off your secondary A pump and bring up your secondary B pump. And then start your roll rate.

S/C 7 OK, RKV. I missed the time on the evaporator switch off.

RKV CAP COM OK. The time for the evaporator switch off is 268 plus 42.

S/C 7 I'll turn the evaporator switch on. I've got that off. Let me get it on.

RKV CAP COM OK. The on time is 268 plus 37.

S/C 7 OK. 37. Then would you .... your primary B pump on.

RKV CAP COM OK. Place the A pump to OFF in the secondary loop, and bring up the Pump B in the secondary loop.

S/C 7 Roger. Secondary ....

END OF TAPE

S/C 7 Roger, secondary A off and secondary B on.

RKV Roger. What is the position of your condensate valve at this time.

S/C 7 Its normal. We haven't touched it.

RKV Is it in normal?

S/C 7 We will check it again. It should be. We haven't touched it.

RKV We don't want you to touch it. We just want to know what position it is in.

S/C 7 Normal.

RKV Houston, copy, flight?

Houston Flt Roger. Have them read back that procedure to you, Bill.

RKV Gemini 7, RKV. We would like you to read that procedure back to us if you would.

S/C 7 Secondary B pump on, secondary A off and secondary B on.

RKV Negative. Why don't we start from the top with my first time of 268 plus 33.

S/C 7 Roger.

RKV Gemini 7, RKV

S/C 7 Go ahead, we are ready.

RKV We are standing by. I would like for you to read that procedure back to me if you would.

S/C 7 Roger. It 268 33 00. Turn prime and secondary A pumps off. Turn prime and secondary B pumps off. Get spacecraft broadside for (garbled). Initiate 10 degree (garbled). At that same time, turn radiator/by pass. That is what we did as set up.

R Roger.

S/C 7 at 216 to 37, evaporator switch on 268 to 41, radiator flow.

S/C 7 At 268 : 42, turn evaporator off, turn tape dump on, primary B pump on. Same time, secondary A off and secondary B on. Is that correct?

RKV Roger. Your final item is stop your roll rate.

S/C 7 Roger. Stop roll rate.

RKV You have got it.

Houston Flt Thats evaporator heat on.

S/C 7 Understand also to be a new update time for D-4, D-7. Is that correct?

RKV Roger. At a time of 268 plus 41, thats select radiator heat. I'm sorry, thats my fault. At 268 plus 42, its evaporator heater off.

S/C 7 Roger. Evaporator heater off.

RKV OK. OK, you have got it, Flight.

Houston Flt Roger. Thats it, Bill.

RKV On that last (garbled) air attempt, they were oscillating somewhat, Flight. I would like a date over the CSQ.

Houston Flt Roger.

RKV I won't insist they go on both spacecraft.

Houston Flt Roger.

RKV That clear. LOS on both spacecraft.

Houston Flt Roger, RKV.

That completes our tape playback of voice communication between our spacecraft Gemini 6 and Gemini 7 that have accummulated over the past 2½ hours. At this time, Gemini 6 is on its seventh revolution and Gemini 7 is on the 168th revolution. At t present time, they are both coming up on the western coast of Africa, the southwestern coast of Africa. They are out of voice communication according to our flight plan at this

e, 10 hours into the flight of Gemini 6, the rendezvous flight. The station-keeping continues and we have word from our flight controllers that bedtime tonight for both crews will take place at an elapsed time, I will give you Gemini 7 elapsed time, 270 hours and 20 minutes, which should be something like 12 hours and 13 minutes elapsed time for the crew of Gemini 6. They will all go to sleep at the same time. This is Gemini Control. We are now 268 hours and eight minutes into the flight of Gemini 7 and 10 hours, 1 minute into the flight of Gemini 6.

END OF TAPE

This is Gemini Control. We are now 10 hours and 12 minutes into the rendezvous mission of spacecraft Gemini 6. And we are 268 hours and 20 minutes into the flight of Gemini 7. At this time both spacecraft are moving out over the Indian Ocean. We have had no voice communication since the Rose Knot tracking ship pass. About 25 minutes ago we did play back the voice tapes. We have some information on the plans now from the recovery people for the recovery of the Gemini 6 crew. They will be taken off the carrier at 0700 Friday according to the present plan. They will be flown to Bermuda, and make a short stop there to change planes and from Bermuda they will fly an Air Force C-140 from Andrews to the skid strip at Cape Kennedy. The Gemini 7 crew, according to the present plan, will fly off the carrier the day after their recovery. They will fly directly to the skid strip at Cape Kennedy. This is Gemini Control. Now we are 268 hours, 21 minutes into the flight of Gemini 7, and 10 hours, 14 minutes into the flight of the Gemini 6 crew. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are 10 hours and 41 minutes into the rendezvous mission of Gemini 6. At the present time the spacecraft are flying approximately 10 to 20 feet apart. They are passing over the Pacific and they are on the 7th revolution for spacecraft 6 and the 168th revolution for spacecraft 7. A few minutes ago we had voice communication with the Coastal Sentry Tracking Ship and at this time we will play back the taped voice communication.

CSQ We have TM soild both our spacecraft.

FLIGHT Roger, CSQ.

CSQ Completed by-pass with both pump A's on.

FLIGHT Roger.

CSQ Gemini 6, CSQ Cap Com.

S/C 6 CSQ .Gemini 6. Go.

CSQ Roger. We'd like for you to observe 7 on this roll procedure and let us know if you see any water coming out of 7.

S/C 6 Roger. We'll observe him and let .....

CSQ Roger.

S/C 7 Is this ..... planned norm .....

CSQ Roger.

Also 6, you'll get a maneuver update, your sep maneuver update, over Hawaii this rev.

S/C 6 Roger.

You might inform Colonel Cooper that we took still photographs and movies of Gemini 7 over the Himalayas and Geminides.

CSQ Roger.

S/C 7 Thank you. We're venting now. If you see us .....

S/C 6 I just saw one flame that time, Frank.

S/C 7 There's a whole lot coming by, right by my side.

..... for you, Wally.

S/C 6 Oh, I see some now, yeah. Could that be your water boiler?

S/C 7 I guess so.

S/C 6 Yeah, I see it now.

Comes out in the crystalline form.

S/C 7 Right.

S/C 6 ..... after you. It's the water boiler.

CSQ Flight, CK 06 is increasing.

FLIGHT Very good.

CSQ You copy air-to-ground?

FLIGHT Affirmative.

CSQ Flight. CK 06 is 3 degrees higher now than it was at acquisition.

FLIGHT Roger. Very good.

S/C 6 Say, uh, wiring cable is hanging out. The value of centrifugal force is just about straight out now and looks like it's about 15 ..... the length of the adapter.

S/C 7 .....

S/C 6 I'll be damned!

S/C 7 Your burn ..... and it whipped all around back there.

S/C 6 It was right after separation .....

S/C 7 Right.

S/C 6 ..... come up and look for us. We're both .....

S/C 7 Right.

FLIGHT CSQ, we'd like an LOS main.

CSQ Say again.

FLIGHT We would like an LOS main.

CSQ Roger.

FLIGHT CSQ Cap Com. Let me know when you see the radiator go back to the flow position, please.

CSQ Roger.

FLIGHT In fact, why don't you cut me a summary right now.

CSQ Main's on the way.

FLIGHT Okay.

CSQ Okay. It just went back.

FLIGHT Okay. I'd like an LOS summary also then.

CSQ Roger. Okay. That CK 06 is reading 53.6.

FLIGHT Roger. 53.6.

CSQ And AOS was 47.6.

FLIGHT Roger.

S/C 6 Gemini 7, this is 6. ..... lots and lots of water coming out all over the back end .....

S/C 7 Thank you.

..... this is 7. I think we ..... our fuel cell ..... too.

S/C 6 Good show. I hope it stays up there .....

S/C 7 See if can stop the rolling, Wally.

S/C 6 Okay.....

CSQ ..... got both ..... back on, flight.

FLIGHT Roger. Looks like we got what we wanted for . . .

S/C 6 ..... cable wind up behind you.

You've got a real ball of ice back there ....you and the water.

S/C 7 Yeah, yeah.

S/C 7 That our water boiler?

S/C 6 .....

S/C 7 ..... fixed.

S/C 6 Negative.

..... starboard about 30 degrees...

CSQ Gemini 6, CSQ. Did you say the water, the frozen water appears to be on the water boiler?

S/C 6 That's obvious to us, yes.

S/C 7 CSQ, you might tell Houston that our section 2 is still real sick, also. Will you please?

CSQ Roger, will do.

FLIGHT Roger, we're working on it and we'll take a look at your data at your LOS.

CSQ 7 - we're still working on it. Houston will take a look at our data and will come up with something on it later.

FLIGHT Radiator operation look normal at your LOS, Chuck?

CSQ Affirmative.

FLIGHT Affirmative. That ought to be good for a replay, and for movies.

CSQ I hope he had his move camera on in 6. It'll be the first acrobatic stunt in space.

FLIGHT Yep. You know you guys are becoming face - famous.

S/C 7 For what, flight.

FLIGHT Say again.

S/C 7 For what, flight?

FLIGHT For rendezvousing and doing all these good things.

S/C 7 Yeah.

CSQ All systems look real good on 6. The only thing on 7 section 2 looked bad. They've been getting low.

FLIGHT Okay. We're thinking of bringing that off-line, Chuck.

CSQ Okay. From the way they described it, it looked like a snow storm.

FLIGHT Roger. That's a White Team Spectacular!!

CSQ Very good.

That was taped voice communication between Wally Schirra in Gemini 6 and the Coastal Sentry Tracking Ship also the voice of Gene Kranz, our Flight Controller here in the Mission Control Center at Houston. We are now 268 hours and 54 minutes, almost now 55 minutes, 268 hours 55 minutes into the flight of Gemini 7. 10 hours 47 minutes into the flight of Gemini 6. At the present time both spacecrafts are passing over the Pacific and are out of voice communication with our tracking stations. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are now 10 hours and 54 minutes into the rendezvous flight of spacecraft Gemini 6. At this time our spacecrafts are moving out over the Pacific on their way toward the South American west coast. A few minutes ago we had voice communication between Wally Schirra, the Command Pilot of Gemini 6, and the Hawaiian Tracking Station, and at this time we will play back that taped conversation.

HAW Okay. 26 niner 00 00. And that's a deletion, your biomed recorder no. 2 to continuous. Delete that item.

S/C 7 Roger.

HAW D-4/D-7: 26 niner plus 21 plus 53. Sequence 430. Mode 03. And this will be on spacecraft 6 during spacecraft 6 separation burn.

S/C 7 Roger.

HAW 271 00 00. Your biomed recorder will go to continuous. That'll be recorder no. 2.

S/C 7 Roger.

HAW 270 20 00. And they want you to delete the sleep period beginning at the CSQ LOS on rev 16 niner.

S/C 7 What time is the D-4/D-7, please?

HAW D-4/D-7 is 26 niner 21 53.

S/C 7 Thank you.

HAW And they want you to add a sleep period beginning at 271 56 00. And that's at CSQ LOS on rev 170. One rev later than originally.

S/C 7 Roger.

HAW Okay. How's the water situation?

S/C 7 Fine. We'd like to go back to one fan if you don't mind.

HAW Okay. Hold on here a second.

HAW Flight, Hawaii.

FLIGHT Roger. We concur, in going back to one fan.

HAW Say again, flight.

FLIGHT We concur in going back to one fan.operation.

HAW Roger, Hawaii.

6 they say you can go back to one fan operation.

S/C 7 Right.

S/C 6 6 is one fan.

HAW ... I'm getting my numbers all fouled up. Seven go on back to one fan.

S/C 7 Rog.

HAW Flight, Hawaii.

FLIGHT Go, Hawaii.

HAW CK 06 is reading 50 decimal 2.

S/C 7 That's a fine place to start the burn from, Wally. I think they just didn't want this IR sensor pointing into the sun.

S/C 6 Got you, Frank.

I'm going ..... eyes on your water boiler outlet, Frank. Looks like a small duct about the size of a tube.

Seven, we'll see you tomorrow.

S/C 7 Thank you.

S/C 6 Roger, good show here.

That was taped voice communication between spacecraft 7, with Frank Borman doing the speaking, rather than Wally Schirra as we reported. At this time we are 10 hours 57 minutes into the rendezvous mission of Gemini 6 and 269 hours 5 minutes into the mission of Gemini 7 and our flight controllers are tell us that the spacecrafts will be at various times now approximately within 200 feet of each other. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are 11 hours 19 minutes into the flight of Gemini 6. And 269 hours 27 minutes into the flight of Gemini 7. At the present time the spacecrafts are passing over South America and we are on the 8th and 169th revolution, respectively. We are going to establish ground voice communication with the spacecraft from the Rose Knot Tracking Ship, momentarily, and we intend to bring this conversation to you, live. And, as I said, we are expecting it momentarily. We now have made acquisition. Let's listen in.

RKV Go, Gemini 7. RKV Cap Com.

S/C 7 Go ahead, RKV, Gemini 7.

RKV Roger. We'd like to delete the two status reports scheduled for this pass and we'll pick it up in the next rev. That's on the Command Pilot.

/C 7 Fine. Go ahead.

RKV Okay. Before you start your purge, we've got a couple of steps we'd like to include tonight. First, we'd like you to purge section 1, O_2 and H_2. Fuel-cell control 2 circuit breaker 2 ON. Purge section 2, O_2 and H_2. Leave the fuel-cell control circuit breaker 2 ON, and power down section 2. Use the power switch depleted to the OFF position. And then turn off the fuel-cell control 2 circuit breaker.

S/C 7 Okay. After we purge power down section 2 is what you said?

RKV That's affirm.

S/C 7 Okay. Here we go.

How about turning off the .... maneuver thruster heater, too?

RKV Say again, Gemini 7.

C 7 We might as well open the circuit breaker to the maneuver thruster heater.

RKV Roger.

FLIGHT We concur on that, RKV.

RKV We concur.

S/C 7 Okey, dokey.

RKV We're copying dope on spacecraft 6, flight.

FLIGHT Roger.

RKV Gemini 7, RKV. I've got your bedtime rules for the cryogenics.

S/C 7 Understand.

Go ahead.

RKV Okay. ECS O_2 heater switch to OFF. Fuel-cell O_2 heater switch to AUTO. And leave your quantity read switch at fuel-cell O_2 for the sleep period.

S/C 7 Roger. How about hydrogen?

RKV We'd like you to put that in AUTO tonight.

S/C 7 Okay.

RKV Your minimum accepted pressure for tonight will be 445.

S/C 7 Okay, and I'll leave it in AUTO.

RKV Rog.

Gemini 6, RKV Cap Com.

S/C 6 Go, RKV.

RKV How'd your separation burn go?

S/C 6 Right on the nose .....

RKV Rog.

S/C 6 We did that in ..... for you.

RKV Roger.

You copy, flight?

FLIGHT Negative, say again, Bill.

S/C 6 We're out to about .68 miles, Bill.

RKV Wally says he's out to about .68 miles. He records the sep burn 9 feet per second. No out-of-plane.

FLIGHT Roger.

RKV Separation's going real well, flight.

Both spacecrafts look GO, flight.

CK 06 suit end of stage inlet temperature primary on spacecraft 7 is reading 49.

FLIGHT RKV Cap Com Houston flight.

RKV Go ahead, flight.

FLIGHT Why don't you give me your systems guys. I got some stuff I want him to copy for you to pass to the crew and you can keep working the crew.

RKV Roger.

RKV Systems Houston flight, this is Gemini 7 systems .....

S/C 7 ..... fly over night, RKV?

RKV That's affirm.

FLIGHT Okay. At time 269 plus 50 00. Evaporator heater switch HEAT.

RKV Systems Evaporator heater switch - what?

FLIGHT To HEAT.

RKV Systems Roger.

FLIGHT Okay. 269 55 00. Evaporator heater switch OFF.

RKV Systems Thank you.

FLIGHT At 270 25 00. Position water boiler towards sun.

RKV Systems Roger.

FLIGHT Evaporator heater switch to HEAT.

RKV Systems Roger.

FLIGHT Time 270 30 00.

RKV Systems Roger.

'LIGHT Evaporator heater switch to OFF.

Do not exceed 5 minutes on heater.

Will you read it back?

RKV Systems 269 50 evaporator heater switch to HEAT. 269 55 evaporator heater switch to OFF. 270 25 position water boiler towards the sun. Evaporator heater switch to HEAT. 270 plus 30 evaporator heater switch to OFF. Do not exceed 5 minutes on heater.

FLIGHT Okay. Why don't you stand by before giving that to the crew. I want to talk to EECON.

RKV Systems Roger.

RKV AFD, RKV Cap Com.

FLIGHT Go ahead. I don't want to pass that up this rev. We'll get it another -- probably over the CSQ.

RKV Roger, flight. We powered down the secondary loops - I'm sorry - the section 2 and the crossover switch is OFF.

FLIGHT Roger.

RKV All systems look good, flight.

FLIGHT Roger.

RKV We've completed the dope flight on spacecraft 6.

FLIGHT Roger.

S/C 6 .....

S/C 7 ..... you want the black light on?

S/C 6 Negative.

S/C 6 ..... Frank, we're fixed up ..... the ground.

S/C 7 Do you want us to follow you?

LIGHT RKV, could we have an LOS main, please?

RKV ... LOS .....

S/C 7 ..... is that what you want?

RKV Say again, flight.

FLIGHT Could we have an LOS main.

RKV That's affirm. Coming at you. Have LOS of both spacecrafts.

FLIGHT Roger.

That was live communication between spacecraft Gemini 6 and Gemini 7 and the Rose Knot Tracking Ship located off the east coast of South America. Just prior to reaching South America on this rev, Wally Schirra fired his forward thrusters of spacecraft Gemini 6 at a rate of 9 feet per second for 15 seconds. This changed his orbit, his orbit now is estimated at 163.2 nautical miles apogee and 154.1 nautical miles perigee. That was the new orbital parameters that he was trying to achieve with this burn. We do not have the exact parameters but we'll check them out. The Gemini 7 remains then at an apogee of 163.6 nautical miles and a perigee of 159.0 nautical miles. This means that Gemini 6 will now move ahead of the Gemini 7 at a rate of approximately 24 nautical miles per revolution throughout this evening, or this night. This is Gemini Control. We are now 11 hours 30 minutes into the flight of Gemini 6, 269 hours 38 minutes into the flight of Gemini 7. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are now 12 hours and 12 minutes into the rendezvous flight of Gemini 6, and 270 hours and 20 minutes into the mission of Gemini 7. At this time our spacecrafts are passing over the Pacific Ocean. Gemini 6 is in revolution 8. Gemini 7 revolution 169. We have passed beyond the Coastal Sentry tracking ship and we have had some voice communication between Gemini 7 and the Coastal Sentry. And at this time we will play back that voice tape.

CSQ — Gemini 7, CSQ Cap Com. We do not have an oral temp on the pilot. Stand by for surgeon and your blood pressure.

CSQ SURGEON — Gemini 7 this is CSQ SURGEON standing by for blood pressure on the pilot.

S/C 7 — . . garbled . .

CSQ SURGEON — Your cuff is full scale. We have a valid blood pressure. Give me a MARK when you begin exercise.

S/C 7 — . . garbled . . pressure is coming down.

CSQ SURGEON — Your cuff is full scale. We have a valid blood pressure. Standing by for food and water report.

S/C 7 — Roger. You have a temperature on the pilot?

CSQ — Gemini 7, we can't hear you.

S/C 7 — During the day Command pilot has had 928 ounces of water./ We both had day 12 meal B, for supper we had day 9, meal C. Column 5 is 30 for the Command Pilot and 6 is 6 for the command pilot.878 ounces of water, column 5 is 28 and column 6 is 6. Standing by for Cap Com.

CSQ I have a node update 7 when you are ready to copy.

Surgeon, Aeromed.

S/C 7 We're ready.

CSQ Roger, 92699804, rev 169,19.8 . . Right Ascension 081527.

Gemini 6 CSQ, do you copy?

S/C 6 . . garbled . . g.e.t.

CSQ Say again.

S/C 6 . . garbled . . g.e.t

CSQ Roger. Your's is coming now are you ready?

S/C 6 Go ahead.

CSQ 114041, rev 8, 19.8 degrees east, right Ascension 08 15 27.

S/C 6 114041, rev 8, 19.8 degrees east, right Ascension 08 15 27.

CSQ Roger, and 6 on your OAMS status. Your fuel remaining is 148 pounds, oxidizer remaining is 193 pounds. Our calculations show that to be an actual 43 percent remaining on propellant. And that was calculated prior to your last SEP burn.

S/C 6 Didn't get it all would you say again after quantities?

CSQ Roger, Did you copy the fuel and oxidizer remaining?

S/C 6 Okay.

CSQ Okay. Propellant quantity remaining actual 43 percent.

S/C 6 Roger, 43 percent, we are reading about 32.

CSQ Roger. This calculation was made before your last SEP burn.

S/C 6 . . garbled . .

CSQ Gemini 7 CSQ. Have you noticed any less water in your SENTO since the temperature run.

S/C 7 Very dry now.

CSQ Good.

S/C 7 . . garbled . .Understand the temperature . . garbled

CSQ Roger . . garbled . . Also we have oxidizer for you 7.

S/C 7 Go ahead.

CSQ Propellant remaining 30 pounds. This is actually 17 percent. The onboard gauge reading is about 3 percent lower than we expected at this point. That is the gauge should be reading 14 percent at this time. So it appears that we stopped the stationkeeping a little early.

S/C 7 Okay. They told me to stop at 11 percent and that's what I read.

CSQ Roger. This will put us in good shape for the remainder of the mission.

S/C 7 . . garbled . .

CSQ Section 2 was taken off the line in hopes to remove some of the water overnight.

S/C7 . . garbled . .

CSQ Flight, I don't think I'll have time to complete the reading on that spinup but I think it was explained to him earlier was it not?

Flight Yea, I think he knows what happened.

CSQ Right. LOS on 6 and 7.

Flight Roger.

That was taped voice communication between spacecraft Gemini 6 and Gemini 7 and the Coastal Sentry tracking ship. At this time our spacecrafts

have moved out over the Pacific. And we have some new orbital parameters for you. Gemini 6 having completed a burn, separation burn, is now in an orbit with 163.2 nautical miles apogee and 154.1 nautical miles perigee. The time to orbit one revolution or one orbit is 90.18 - 90 minutes 18 seconds. For Gemini 7 the apogee is 163.7 nautical miles. The perigee 159.0 nautical miles. The time to complete a revolution or orbit is 90 minutes and 24 seconds. This is Gemini Control. We are now 12 hours 20 minutes in the rendezvous flight of Gemini 6 and 270 hours 27 minutes into the Gemini 7 mission. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are now 12 hours 35 minutes into the flight of Gemini 6. The rendezvous mission. And 270 hours 43 minutes into the mission of Gemini 7. At this time the spacecraft are passing over the Pacific on the 8th and the 169th revolution, respectively. A few minutes ago we had communication, at least an attempted communication, between our Cap Com Gene Cernan here, astronaut Gene Cernan, in the Mission Control Center, remoting through the Canton Island Tracking Station and at this time we will play back that voice tape.

HOUSTON Canton, go remote.

CTN Canton remote. Canton has acquisition.

CAP COM Gemini 6, Gemini 6, Houston Cap Com. Over.

Gemini 6, Gemini 6, Houston Cap Com. How do you read? Over.

Gemini 6, Gemini 6, Houston Cap Com. How do you read? Over.

Gemini 7, Gemini 7, Houston Cap Com. How do you read?

Gemini 6, Gemini 6, Houston Cap Com. I've got your PLA updates. Over.

Gemini 6, Houston. I'm reading you very weak. Are you ready to copy your updates? Over.

S/C 6 Affirmative.

CAP COM I understand you're ready. Area 9 niner Bravo: That's area niner Bravo: GETRC 13 1 niner 36. 400K is 20 plus 25. Reverse bank is 26 plus 13. All these bank angles for all these updates will be niner 0 degrees. Niner 0 degrees. Area 10-Delta: GETRC 14 17 05. 400K 20 plus 32. Reverse bank 25 plus 54. 11-2: GETRC 15 52 02. 400K 20 plus 11. Reverse bank 25 plus 40. 12-2: GETRC 17 25 40. 400K 20 plus 03. Reverse bank 25 plus 35. Area 13-2: GETRC 1 niner 01 21. 400K is 1 niner plus 58. Reverse bank 25 plus 28.

CAP COM Did you copy, Gemini 6?

S/C 6 Roger. I won't read them all back. What's the rest of entry 17-1 . . . .

CAP COM Gemini 6, Gemini 6, our estimate right now looks like about 25 plus 15. That's 25 plus 15.

Gemini 7, Gemini 7, Houston Cap Com, over.

S/C 7 Go ahead, Gene, 7.

CAP COM Roger, 7, I'm reading you very weak but clear. We'd like you to - - we'd like to know if you really feel you've got a good handle on this suit off configuration, especially regarding location of hose, and ventilation, etc. We were hoping that maybe you might be able to do a little bit better experimenting tomorrow.

Gemini 7, Gemini 7, understand you can't read me. I'll say again more slowly. We would like to know if you feel you really got a good hack on the shirt-sleeve operation regarding location of hose for ventilation, etc. Over.

S/C 7 Do you read, Houston?

CAP COM Gemini 7, reading you now. Say again.

Gemini 7, Gemini 7, this is Houston Cap Com broadcasting in the blind. We would like a film report from you over the RKV concerning the day's activities if you can get it together.

Gemini 6, Gemini 6, Gemini 7, Gemini 7, this is Houston Cap Com. We will be broadcasting music on HF commencing in about 5 minutes. That's HF in about 5 minutes - music.

That was taped voice communication between our Cap Com here in the Mission Control Center, astronaut Gene Cernan, and the two crews, the Gemini 6 crew and the Gemini 7 crew with the voice remoted over the Canton Island Tracking Network. This is Gemini Control. We are 12 hours and 41 minutes into the flight of Gemini 6 and 270 hours 48 minutes into the flight of Gemini 7.

END OF TAPE

This is Gemini Control. We are 12 hours 59 minutes into the flight of spacecraft Gemini 6 and 271 hours and 2 minutes into the mission of Gemini 7. At this time our spacecrafts are passing over South America. They have begun revolution 9 for Gemini 6 and revolution 170 for Gemini 7, respectively. And we are awaiting monentarily to get voice communication established between the two spacecraft and the Rose Knot tracking ship which is located off the east coast of South America. And in a very few minutes we expect that the voice communication will have been established. Then we propose at that time to bring you the live communication between the spacecraft and the ground station. We now have voice communication let's listen in.

RKV 7, RKV your cuff is full scale.

S/C 7 Roger.

RKV We're copying a dump flight on spacecraft 6.

S/C 6 Roger.

RKV Gemini 6, RKV Cap Com. We're copying your dump while transmitting you a TX.

S/C 6 Roger. . . garbled . .

RKV Roger.

RKV 7 RKV, we have a valid blood pressure. Standing by for your exercise.

S/C 7 Roger.

RKV Gemini 6, RKV. We don't have any maneuver updates up for you as soon as we finish with Gemini 7, crew status report.

S/C 6 Roger.

RKV Gemini 7, RKV, your cuff is full scale.

S/C 7 Roger.

RKV All systems look good, Flight.

Flight Roger, RKV.

RKV 7, RKV, we have a valid blood pressure. RKV surgeon out. Gemini 6, RKV Cap Com.

S/C 6 Go.

RKV Roger, you ready to copy your maneuver update?

S/C 6 Stand by one. Gemini 6, ready to copy.

RKV Roger. G.e.t. B 43:25:52, delta V 9 feet per second, burn time zero plus 11; zero yaw; zero pitch; course 25 000:90; course 26 and course 27 all zeros; aft thrusters; the maneuver is cross grade.

S/C 6 Roger. Burn 43:25:52; delta V zero 9 feet per second; zero plus one one seconds; yaw zero; pitch zero; course 25 000:90: 26 and 27 all zeros; thrusters aft; cross grade.

RKV Roger, you got it.

S/C 7 RKV 7 here.

RKV Go ahead

S/C 7 Would you tell the people in Houston to plan on giving us about 2 or 3 hours tomorrow afternoon to go on reentry procedures and about 4 hours on Friday to pack the spacecraft for reentry.

RKV Roger, will do

S/C 7 Thank you.

RKV 6, did you copy the block update over Canton - the complete block update?

S/C 6 . . garbled . .

RKV Okay.

Gemini 7, can you give us a rundown on your station keeping?

S/C 7 We did about 5 minutes of it. Very little because we cut off on the OAMS fuel.

RKV Roger. How about you 6?

S/C 6 . . garbled . . Started in, looked like a very easy task . .

RKV Roger.

S/C 6 I was told we were all ready for it . . garbled . . any difficulty at all.

RKV Roger.

S/C 6 Both in pulse mode and platform mode.

RKV Rog.

S/C 6 Didn't have any trouble, they were poking all around up there.

RKV Sounds like fun.

S/C 6 Sure was. Got a bunch of . . garbled . . back of that thing.

RKV Did you get some good pictures?

S/C 6 Well I sure hope so. We shot about . . garbled . .

RKV Gemini 7, we'd like a similar report from you, if you've got one.

S/C 7 Roger. We just don't have one yet.

RKV Okay.

S/C 7 Film pack report. Twenty-two frames of black and white. 104 frames of SU-250. 17 frames of color shifted IR. 57 frames of fast SO-217. 74 frames of white contrast, and

2 movie magazines.

RKV Roger. Okay, as soon as we have LOS we're going to have some music for you,up on HF.

S/C 6 What time do you want us to get up tomorrow.

RKV Let me check with flight.

What time do you want them to get up,flight ?

Flight We'll advise them over the CSQ.

RKV They'll give you a wake up time over the CSQ.

S/C 6 . . garbled . .

S/C 7 Give us a call when you want us to wake up. We are both pretty beat tonight.

RKV Yea, we figured you were. We'll do that.

All systems GO Flight. We've completed the dump.

Flight Roger, could we have an onboard prop quantity and source pressure from 7 then?

RKV Roger.

Flight And then they can go to sleep.

RKV Gemini 7, RKV.

S/C 7 Go ahead.

RKV Could we have a prop quantity and source pressure?

S/C 7 Propellant quantity reads 11 percent.

RKV Roger.

S/C 7 Source pressure is 750.

RKV Roger. Have a good nights sleep. I feel like a baby sitter. I tuck you in every night and now I'm baby sitting for four of you.

S/C 7 . . garbled . .

RKV Don't sweat it. We're watching you.

S/C 7 . . garbled . .

That was live voice communication between our two spacecraft Gemini 6 and Gemini 7 and the Rose Knot tracking ship. Speaking for Gemini 7 was our command pilot, Frank Borman and it sounded very much like Tom Stafford was doing the talking for Gemini 6. We are now 13 hours and 5 minutes into the mission of Gemini 6, and 271 hours 13 minutes into the mission of Gemini 7. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are now 13 hours and 12 minutes into the flight of Gemini 6. And 271 hours 20 minutes into the flight of Gemini 7. At this time the spacecrafts are approaching the west coast of Africa. We are on revolution 9 for Gemini 6 and revolution 170 for Gemini 7. In our voice communications recently over the Rose Knot Tracking Ship with the spacecraft, we learned from Tom Stafford and Frank Borman that there have been pictures made. They made pictures of each other's spacecraft while in space. This is the second report we've had of that and we certainly can look forward to some good pictures, we hope. Since Gemini 6 has terminated its rendezvous and had made a burn to separate from Gemini 7, they are now in a somewhat different orbital plane or orbital parameters and they will be spending this night in varying distances apart - the distances will vary between the spacecraft from 22 to 42 nautical miles throughout the night. All systems from the ground in both spacecraft look good. The crews are in excellent physical condition, although Frank Borman said that they were pretty beat after this long day of work, and we have had instructions from our Flight Director, Gene Kranz, who has put out the word to the network, that there will be no further communication with the spacecraft Gemini 7 for this night, and Gemini 7 thus officially enters its sleep period. We do expect that we will have one more - at least one more - communication with Wally Schirra and Tom Stafford and their Gemini 6 spacecraft. This is Gemini Control. We are 13 hours 14 minutes into the mission of 6. 271 hours 22 minutes into the mission of Gemini 7.

END OF TAPE

This is Gemini Control. We are now 13 hours and 52 minutes into the mission of Gemini 6. And 271 hours 59 minutes into the mission of Gemini 7. At this time our spacecraft are passing over the Pacific, having just got out of voice range with the Coastal Sentry Tracking Ship. During that pass we had voice communication with the Coastal Sentry and spacecraft Gemini 6 and at this time we will play back the taped voice communication for you.

CSQ Gemini 6, this is CSQ Surgeon. Standing by for Command Pilot's blood pressure.

CSQ Gemini 6, this CSQ. Do you copy?

Gemini 6, this CSQ. Do you copy?

S/C 6 CSQ. Read you loud and clear.

CSQ Roger, stand by for Surgeon.

FLIGHT Let's expedite out there, Chuck.

SURGEON Your cuff is full-scale.

We have a valid blood pressure and standing by for the Pilot's blood pressure. Your cuff is full-scale. We have a valid blood pressure. Standing by for a food and water report.

CSQ Gemini 6, standing by for your food and water report.

Also like to get a cabin temp reading, and your suit inlet temp reading.

S/C 6 Roger. On the food and water report. Both pilots have consumed 2 meals. I'll line up the water for you ..... The cabin temperature is 84. The suit temperature is 58.

CSQ Roger. I'd like to get a propellant quantity remaining and OAMS source pressure.

S/C 6 Have 32 percent indicated propellant quantity. OAMS source temperature is 73 psi. Is 16 .....

CSQ I copy 1650.

S/C 6 Roger.

CSQ We have a valid oral temp on the Command Pilot.

Okay. At your convenience we'd like for you to run a cabin temp survey. This will go in your log book for postflight. Like the cabin ambient dry and wet bulb, suit inlet, dry and wet bulb, remove the blue nozzle, and check directly in the O_2 flow. If possible we'd like a hatch surface temperature and side-wall surface temperature.

S/C 6 Okay. ..... We're ..... after a hard day's work. We'll get that to you sometime tomorrow.

CSQ That's affirmative. At your convenience.

S/C 6 Okay.

CSQ I'd like your evaluation of your posigrade burn.

S/C 6 No residual.

CSQ Roger.

FLIGHT Are they powered down, Chuck?

How does ground TM look?

CSQ Flight, he has the IEVU on, he's inaccurate.

FLIGHT Okay. I'd like an LOS main in spacecraft 7, CSQ.

CSQ Roger. I'd like to go back to their food and water, flight.

FLIGHT What do you mean?

CSQ I haven't got the water, yet and I didn't copy completely their food.

FLIGHT They said they had 2 meals, Chuck.

CSQ They said ..... a meal.

FLIGHT We'll pick that up tomorrow morning.

CSQ Okay. And also, I'm not going to push them either for their water.

FLIGHT Roger.

They said they were adding it up.

CSQ That's affirmative. They sound pretty tired.

FLIGHT ROGER.

CSQ Thought it might be a little attitude thruster activity on the 6 in pulse mode.

FLIGHT Roger.

CSQ We've had LOS on spacecraft 7.

FLIGHT Roger.

CSQ We haven't had LOS but it's broken, just broken TM.

We have LOS, flight.

FLIGHT Roger.

That was taped voice communication between spacecraft 6 and the Coastal Sentry Tracking Ship. Both Command Pilot Wally Schirra and Pilot Tom Stafford were in on that conversation with the Tracking Ship. At this time both our spacecraft have moved out over the Pacific. We are now in revolution 9 for Gemini 6. Revolution 170 for Gemini 7. The elapsed time for Gemini 6 is 13 hours 57 minutes, for Gemini 7 272 hours and 4 minutes. At this time both crews are in a sleep period. There will be no further attempt to communicate with the crews for approximately 10 hours which is the duration of their sleep period. We have now a new, some new orbital parameters on spacecraft 6 as a result of the burn that they made recently. They are now, should be now, at 154.1 perigee nautical miles, 154 nautical miles by a 168.2 nautical miles apogee. This would give them an orbital period of 96 minutes 24 seconds. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are now 14 hours and 12 minutes into the mission of spacecraft Gemini 6. The orbital values for Gemini 6 at this time is 154 nautical miles perogee, 168 nautical miles apogee. We are also 272 hours and 20 minutes into the flight of Gemini 7. And Gemini 7 is flying an orbit 158.9 mautical miles perigee, 163.7 nautical miles apogee. The - because of the way these orbits are overlaping there is a distance that will vary throughout the night between the relative position of the two spacecraft. This will vary between 42, 22, and 42 miles. It's essentially a station keeping orbit for both of them. And when the crew is awake they will be not more than 42 miles apart. According to our flight plan now both crews have entered a sleep period and if you have been keeping up with our voice transmissions through the night you will know that both crews are rather tired and eagerly looking forward to this rest period. We will be in a sleep period for approximately 9 more hours. This is Gemini Control. We are on revolution 9 for spacecraft 6 and revolution 170 for Gemini 7. Both spacecraft are currently ending these revolutions and will very shortly be picking up on the next. This is Gemini Control.

END OF TAPE

This is Gemini Control. We are now 15 hours and 12 minutes into the flight of Gemini 6 and we are 273 hours and 20 minutes into the flight of Gemini 7. At the present time our spacecrafts are over India. Gemini 6 is on its 10th revolution. Gemini 7 is on its 171st revolution and the crews aboard both spacecraft are in a sleep period. We do not yet have confirmation from the ground data as to whether the crews are asleep. Our last report on ground data is from the Rose Knot tracking ship on the last revolution, or the beginning of this one. And at that time the crews were awake. However, they were resting. This is Gemini Control, 15 hours 13 minutes into the mission of 6, 273 hours and 20 minutes into the mission of 7.

END OF TAPE

This is Gemini Control. At 275 hours and 20 minutes into the flight of Gemini 7, 17 hours 12 minutes into the flight of Gemini 6. We are on the 11th revolution of Gemini 6, which is in an orbit of 168.2 nautical miles by 154 miles nautical. Gemini 7 is in its 122nd revolution and its orbit is 163.7 nautical miles by 158.8 nautical miles. The Gemini 7 crew are asleep, according to reports from the Surgeon, and they are comfortable, their suits are dry. The Gemini 6 crew is also asleep. As the Surgeon put it, the 6 crew is tired, but fine and apparently in deep sleep. They look forward to a busy flight schedule for tomorrow, Gemini 7 does. Gemini 6 also has a busy schedule. It has to come back in 8 hours and 2 minutes from now. The spacecraft are in the same orbital plane but their orbits - and their orbits take about the same amount of time to complete. They come within 22 miles of each other and they go out as far as 40 nautical miles from each other. From the Cape we hear that they are at T minus 30 minutes and counting for a thrust augmented delta launch of a Pioneer Satellite which is expected to orbit the sun and within 6 months get within 77 million miles of the sun and orbit it with a period of 310 days. That gives the Pioneer Satellite a year of 310 days. They are up there to measure atomic and sub-atomic particles in magnetic fields in deep space and the countdown is proceeding toward a launch scheduled at 20 minutes after the hour. That's 20 minutes after 1 c.s.t., 20 minutes after 2 e.s.t. This is Gemini Control.

END OF TAPE

This is Gemini Control. We have four "cool cats" up there. That's how the Canary Island Station described the data they were receiving from the four pilots aboard Gemini 6 and 7 now crossing the northern western part of Africa over the Nile River. Seven has been up there for 276 hours and 20 minutes and 6 has been up there for 18 hours and 13 minutes, during which time they performed the first space rendezvous today. Six is in its 12th revolution, 7 in its 173rd. At Cape Kennedy a delta-Pioneer combination was launched at 2:31 a.m. e.s.t., to put the Pioneer Satellite into solar orbit. That spacecraft is also headed toward Africa. It is in its coast phase and is expected to burn again into its solar trajectory in a few minutes. We have no further word on that from the Cape. At 276 minutes and 21 minutes into the flight of Gemini 7, 18 hours and 13 minutes into the flight of Gemini 6, this is Gemini Control.

END OF TAPE

This is Gemini Control. At 277 hours and 20 minutes into the flight of Gemini 7, 19 hours 12 minutes into the flight of Gemini 6. Both spacecraft now are going across the Southern Pacific on their way toward, cutting right through Panama. Six is still in its 12th revolution, and 7 is still in its 173rd revolution. Both crews are sleeping. But Frank Borman, Command Pilot aboard Gemini 7, woke briefly over the Carnarvon Station, to let them know that his delta P light had come on and that it had burned for half an hour. The little delta P light which is on his console and right in front of him apparently woke him up and he went back to sleep after noting the time, when it went off it woke him up again, he noted the time and he notified Carnarvon. The delta P light is of no significance. At this time the stack that the delta P light represents, in this case is not active.. So they'll take care of it in the morning. We understand from the Cape that the Pioneer launch was successful, that the third stage did burn Pioneer into a trajectory toward the sun where it will go into orbit and in 6 months will be within 77 million miles of the sun in an orbit with a 310 day year. The retrofire clock for Gemini 6 reads 6 hours 1 minute and 23 seconds now to the time that Gemini 6 would fire its retrorockets for a landing in the primary recovery zone in the Atlantic. These figures will be updated and we'll give you those figures when they develop. This is Gemini Control.

END OF TAPE

This is Gemini Control. At 278 hours and 20 minutes into the flight of Gemini 7. 20 hours 12 minutes into into the flight of Gemini 6. Both spacecraft just now over the Central part of Australia. 7 on its 174th pass, 6th on it 13th revolution. About 3:00 o'clock this morning Central time the Gemini 6 crew woke up, or at least they appeared to be awake on the ground. There was a lot of activity in the spacecraft and the surgeon commented that there seemed to be a lot of conversation and activity going on in the cabin. We confirmed that later on, like over Carnarvon we heard them talking. Also the Gemini 7 crew seemed to have woke up over the Indian Ocean not very long ago. And Carnarvon got involved in conversation with the spacecraft and we'll play that conversation for you now.

S/C 6 Carnarvon Cap Com, Gemini 6.

Carnarvon Gemini 6, Carnarvon go ahead.

/C 6 Roger. Now that we are over you can we have an update on our node and . . garbled . .

Carnarvon Stand by.

Flight Carnarvon stand by a second.

You can give him this update. Node 204209; remarks is rev 13, 118.7 degrees west right Ascension 08 hours 04 minutes stand by 10 seconds.

Carnarvon Roger, Copy. Gemini 6, Carnarvon

S/C 6 Go ahead

Flight Stand by don't . .

Carnarvon Have your node update - 20 42 09; rev 13; 118.7 Frank did you have something on that?

Flight Yea, I don't want to wake up the 7 crew.

S/C 6 I'm sure they are both awake.

Flight Both 7 crew?

S/C 6 Yea, it looks like it. We've already given him the data.

Flight Okay, let's keep the talking down as much as we can.

Carnarvon Roger, Flight.

This is Gemini Control, 278 hours and 22 minutes into the flight of 7, 20 hours and 15 minutes into the flight of 6. This is Gemini Control.

END OF TAPE

This is Gemini Control, 279 hours and 20 minutes into the flight of 7, 21 hours and 12 minutes into the flight of 6. We have some preliminary data on retrofire for 6 this morning and it reads like this. At approximately 8:53:19 central time Gemini 6 should fire retrorockets somewhere northwest of the Canton Island Station. At 9:13:32 they should reach 400,000 feet, that's the beginning of the sensible atmosphere. The so-called blackout period, communications blackout period, should begin at about 9:16:05 somewhere near the Cape and they should get out of that blackout period at about 9:21:12 near the Grand Turk Station. At about 50,000 feet the drogues will come out, that should be at 9:22:55 and the main chute should come out at about 9:24:38. The time of splashdown is currently predicted to be 9:28:59 central standard time at 23 degrees 36 minutes north by 67 degrees 50 minutes west in the prime 17-1 recovery area. Currently, both spacecraft are passing across Africa having just passed the Canary Islands Station. There has been no conversation with the crew since that brief conversation between 6 and the Carnarvon Station a rev ago. At 279 hours and 21 minutes into the flight 7 and 21 hours and 14 minutes into the flight of 6, this is Gemini Control.

END OF TAPE

This is Gemini Control at 280 hours and 20 minutes into the flight of Gemini 7, 22 hours 12 minutes into the flight of Gemini 6. Both spacecraft now crossing the Pacific and headed toward a pass across Mexico and Florida. Spacecraft 6 and 7 both have been talking with our ground stations, somewhat, mostly getting flight plan updates, and we will play a tape of the conversation between Carnarvon and the spacecrafts now.

CRO Gemini 6, Carnarvon.

S/C 6 Go Carnarvon.

CRO Roger, we've had a little problem with your tape recorder. We would like to have you place your reentry C-band to continuous, please.

S/C 6 Reentry C-Band to continuous.

CRO Okay, tape recorder power circuit breaker on.

S/6 Tape recorder power circuit breaker on.

CRO Okay, place your tape playback switch to the reset position momentarily, then back to command.

CRO Roger, reset to command.

Flight You have MA 95?

CRO Negative, MA95, Flight.

Flight I'm afraid we have the same problem we had on 7. The only thing you can suggest is that they try to tap it, if they can.

CRO Roger. Gemini 6, Carnarvon. Seems like we've got the same problem with your tape recorder as we had on 7. If you can reach it, you can try to tap it. Maybe we can get the tape motion.

S/C 6 I thought I heard this conversation before.

CRO Copy.

S/C 6 Rog.

CRO Okay, standby 6, I'm going to 7 now and get a purge.

S/C 6 Roger.

CRO Gemini 7, Carnarvon.

S/C 7 Good morning Carnarvon.

CRO Good morning. Okay, we've got a purge for you, but first I'd like to get your adapter C-band to continuous.

S/C 7 Roger, Adapter C-band to continuous.

CRO Okay, your crossover switch to normal and purge section 1.

S/C 7 Roger, Section 1 coming up.

CRO Okay, while you are listening for your purge 7, I'm going back to 6 for some more information.

S/C 7 Rog.

Flight Don't forget, that's just section 1.

CRO Repeat Flight.

Flight That's just section 1 we wanted to do.

CRO Roger. Gemini 7, that is just section 1 we want purged.

S/C 7 Understand.

CRO Gemini 6, Carnarvon.

S/C 6 Gemini 6, go.

CRO Okay, I have some instructions for you. Okay, you can power up. All right, we'd like to bring your computer and bring it up to power and bring your radar up to standby. After 5 minutes turn radar on and copy radar readings every 10 minutes, between Carnarvon and U.S.

Flight What we want there is range, pitch, and time.

S/C 6 Okay, we've got our computer on. It's in prelaunch, turn the radar on at 42 minutes elapsed time.

CRO Roger, what we want off your radar is your time, range, and

pitch.

S/C 6 On spacecraft 7.

CRO That's affirmed. We'll be turning the transponder on.

S/C 6 Okay, it will be after me, that's correct, is it not?

CRO That is affirmed.

S/C 6 Okay, we are getting a good look at you all now, approaching.

CRO Also I have a flight plan update for you whenever you are ready to copy.

Flight Carnarvon, Houston.

CRO Go ahead Houston.

Flight Did you get the L-band transponder on?

CRO I haven't got it on yet, Flight.

Flight Okay, that takes 10 minutes to warm up.

CRO Rog. Gemini 7, Carnarvon.

S/C 7 Go ahead Carnarvon.

CRO Okay, can you turn your L-band transponder on please.

S/C 7 Roger. It's on.

CRO Now are you ready to copy 6.

S/C 6 That's affirmative. Go ahead.

CRO Okay. Time 22 25 06, crew status report at Canaveral. That completes the update of just a short item. Can you position your cryo gauging switch to ECS O_2, please.

S/C 6 Rog. ECS O_2 and 22 25 06, crew status at Canaveral.

CRO That's all Gemini 6.

S/C 6 Carnarvon, Gemini 6.

CRO Go ahead Gemini 6.

S/C 6 Roger, I took .. (garble) one pill at 35 (garble) .. 21 hours. I had some nasal congestion.

CRO Could you repeat, please.

S/C 6 Roger. I took one Actifed pill at 21 hours 35 minutes.

RO Roger, we copy. Okay, you can turn your cryo gauging switch back to off, 6.

S/C 6 Roger, we are going around to pick up 7.

S/C 7 Carnarvon, section 1 purged, section 2 standing by.

CRO Roger, 7. All right, turn your primary coolant valve circuit breaker off.

S/C 7 Is that for 7, Carnarvon.

CRO That is affirmed, for 7.

S/C 7 Roger, primary coolant valve coming off.

CRO Radiator switch to bypass.

S/C 7 Radiator switch is on by-pass.

CRO Secondary pump B off.

S/C 7 Secondary pump B off.

RO Secondary pump A on.

S/C 7 Pump A is on secondary.

CRO Okay, we'd like for you to pump your fuel cell H2 tank prussure up to 550 your gauge reading.

S/C 7 The heater's been on all night, Carnarvon, up as high as it will go.

CRO Okay, what do you show for a reading?

S/C 7 510 Carnarvon.

CRO Okay, pump it up to 550 please.

Flight They can't get it, the heater's on.

S/C 7 We can't ... (garbled)

CRO Roger, Roger. I understand.

S/C 7 It's up as high as it will go.

CRO Okay. Also, crossover switch off.

S/C 7 Crossover is off.

CRO Okay, we'd like your cryo readouts please.

S/C 7 .... (garbled)

CRO Okay, will you go to the ECS 02 position.

S/C 7 ECS 02. We are reading 840 pressure and about 50 percent -- 49 percent.

CRO Roger, copy. Okay, you can put your cryo gauging switch to Off 7.

S/C 7 Roger, it's off.

CRO Okay, I have a flight plan update if you are ready to copy. Gemini 7.

S/C 7 Go ahead Carnarvon.

CRO Okay, node, 281 49 30, rev 176, 164.9 degrees west, right Ascension. 07 hours 51 minutes 26 seconds. Flight plan time line update, change 280 00 00 to 280 10 00. Did you copy.

S/C 7 Roger.

CRO Time 280 26 38, go--no-go at Guaymas. Time 280 28 51, fuel cell purge on section 2 at Texas. Did you copy.

S/C 7 Roger.

CRO Time, 280 47 40, PLA update at Canaries. Time 281 23 41, crew status report, Command Pilot at Carnarvon. Did you copy.

S/C 7 Roger.

CRO Okay, we are about to have LOS. We've got two or three more items. I don't know if I can give them to you. The next item is a dim-light, time 281 48 00, sequence number 02, clouds, quarter moon use exposure of 1 second and 5 seconds. Did you copy? We've had LOS Flight.

That was Wally Schirra who was talking about, "It seems we - I thought I heard that conversation before," he told the station at Carnarvon, referring to the kicking of the tape recorder. There was a little more conversation about that tape recorder when they passed the Canton Station. We will play that tape for you now.

Cap Com Gemini 7, Houston.

S/C 7 Go ahead Houston. You are loud and clear.

Cap Com Roger. Good morning, Frank.

S/C 7 Good morning.

Cap Com I'd like to request that you place your heater on so we can get the hydrogen pressure above the regulation pressure for a double purge. We request you pump it to 550 psi, then place your switch back in the auto position.

S/C 7 All right. I'll do it.

Cap Com And I have the continuation on your flight plan update that you weren't able to get at Carnarvon.

S/C 7 Go ahead.

Cap Com Roger, dim-light, time 281 48 00, sequence 02, clouds, quarter moon, use exposure of 1 second and 5 seconds.

S/C 7 Roger, go ahead.

Cap Com Time, 282 04 07, crew status report, Pilot, at Texas. Time 282 59 22, purge fuel cells at Carnarvon. Title dim-light, perform sequence 01, twilight bands whenever possible. That's the end of the flight plan update. Also, Frank. We request to know when you intend to get back out of your suits?

S/C 7 Houston, you are gubbeling.

Cap Com Gemini 7, Houston. We would like to know when you would anticipate getting out of your suits.

Cap Com Gemini 7, Houston. Do you read. Gemini 6, Houston. Gemini 6, Gemini 6, Houston.

S/C 6 This is Gemini 6 Houston, go.

Cap Com Roger, Gemini 6. Request that you kick the tape recorder. We feel that the tape might be out of the limit switch and - by kicking it, we might get good tape operation.

This is Gemini Control with some times on the retrofire and locations. Retrofire will be at 8 53 19 central time. This should take place about 700 miles northwest of Canton. The spacecraft will reach the sensible atmosphere, 400,000 feet at 9:13:32 central time, about 80 miles north of Laredo and southwest of San Antonio. The spacecraft will pass south of Houston. They begin their so called blackout period, the period when the ionized layer around the spacecraft prevents communication and that should be at 9:16:05 and should be about 140 miles south of Pensacola, Florida. They should enter this period of blackout at 9:21:12 near Grand Turk, where we have a station and the drogue parachutes are due to come out at 50,000 feet, that's at 9:22:55 central time, the main chutes at 9:24:38, and splashdown should occur at 9:28:59 this morning, central time, about 645 miles south of Bermuda and 850 miles east of the Cape, Cape Kennedy. The aircraft carrier Wasp, prime recovery vessel in area 17-1 is heading for that station and is due to arrive there by 7:30 central standard time. The weather in 17-1, 2000 feet, scattered visibility 10 miles, wind 10 knots, sea 1 to 2 feet, temperature 75 degrees. We got that weather from the Weather Bureau's Spaceflight Meteorology group. While spacecraft 6 is ending it 14th revolution now, 7 is ending its 175th revolution now at 22 hours and 26 minutes into the 6 flight, 280 hours 34 minutes into the 7 flight, This is Gemini Control.

END OF TAPE

This is Gemini Control. 280 hours, 52 minutes into the flight of Gemini 7. 22 hours, 44 minutes into the flight of Gemini 6. We've just had a pass across the States with two Flight Directors on hand, the oncoming Red Flight Director, John Hodge; Chris Kraft, the outgoing....We've had Chris Kraft and John Hodge in here today plus our Cap Com, Charlie Bassett. There was a lot of lively conversation between the spacecraft and the ground and those 3 people. We'll play that coversation for you now.

GYM Gemini 7, Guaymas Cap Com.

S/C 7 Go ahead, Guaymas.

GYM Roger. We're ready for your "go/no go" quantity.

S/C 7 Roger. Coming up. Okay, Guaymas. Our batteries...main batteries all checked okay. Fuel cell stack read out: 1A, 8.5; 1B, 9; 1C, 8.0; both 2A and 2B are zero, zero, they're open circuit. Main circuit voltage 24.5.

GYM What's the open circuit voltage?

S/C 7 RCS A pressure 3000, temperature 80. B is 3000, temperature is 80. Left hand secondary 02, 5400. Right hand secondary 02, 5300.

GYM Roger. Copy.

HOUSTON Did you get the open stack voltage?

GYM I'll get it. Okay, now give me the open stack voltage on 2A, B, and C.

S/C 7 2A is off scale high. B is off scale.....All three are off scale high.

GYM Roger.

HOUSTON Okay. If you look alright there, you can give them a go.

GYM Roger. We have you go for 192-1. You have that TR in your in your DCS at this time. It will not be updated at this time.

S/C 7 Thank you.

HOUSTON Thank you, Guaymas. Texas, take the air to ground.

TEXAS Texas has it.

GYM Flight, Guaymas.

TEXAS Texas has acquisition. Gemini 7, Texas Cap Com.

S/C 7 Go ahead, Texas.

TEXAS Roger. We'd like you to turn secondary pump A off and secondary pump B on.

S/C 7 Roger. Secondary pump A to off. Secondary pump B to on.

TEXAS Radiator switch to flow.

S/C 7 Radiator is flow.

TEXAS Now, will you put coolant valve circuit breaker to closed.

S/C 7 My coolant valve circuit breaker is closed.

TEXAS Okay. We's like onboard read outs of Section Two voltage please.

HOUSTON We've got those. Texas, we've got those.

S/C 7 All Section Two stack voltages are off scale high, about 32 volts.

TEXAS Roger. Copy. Crossover on.

S/C 7 Crossover's on.

TEXAS Now fuel cell control Section Two circuit breaker closed.

S/C 7 Roger. Completed.

TEXAS Am standing by for a double length purge on Section Two.

S/C 7 After I put Two back on the line.

HOUSTON Open circuit.

TEXAS That's open circuit purge. Gemini 7, do you copy?

S/C 7 Roger. You want 2 back on the main bus, or do you want to leave it off for the double length purge?

TEXAS Leave it off. Leave it off.

S/C 7 Roger. Commencing double length purge.

HOUSTON Texas, would have CM-1 in 6 to see what his oral temp is now, please.

TEXAS Say again please, Texas.

HOUSTON Have the command pilot of 6 put the oral temp in his mouth.

TEXAS Roger. Copy. Gemini 6, Texas Cap Com. We'd like to have the command pilot to put the oral temp probe in his mouth at this time.

S/C 6 Just ruined a good breakfast.

TEXAS Sorry.

HOUSTON Go ahead.

S/C 6 Hello, Houston. This is Gemini 6, with the water and food status report.

HOUSTON Roger, Gemini 6. Houston Surgeon. Go ahead.

S/C 6 Roger. Command pilot has a total of 129 half ounce drinks and three meals. Pilot has 113 half ounce drinks and three meals.

HOUSTON Roger. Copy 3 meals apiece, one with 129 half ounce drinks and 113 half ounce drinks for the command pilot and pilot, respectively. Would you give us a report on your sleep.

S/C 6 We slept approximately 5 hours apiece.

HOUSTON No good. Gemini 6, Houston Surgeon. Would the pilot send us a blood pressure while we're awaiting the command pilot's oral temp.

S/C 6 Roger.

S/C 7 Houston, double purge complete on Section Two.

HOUSTON Roger, on double purge complete on Section Two. Place your fuel cell control to circuit breaker off.

S/C 7 Roger. Completed.

USTON Repeat step 5. Open...

Cuff is full scale, 6. Open circuit read outs on 2A, 2B, and 2C voltage.

S/C 7 Open circuit read outs on 2A, 2B, and 2C are all off scale high, about 32 volts.

HOUSTON Put back on line.

S/C 7 Roger. Section Two going back on the line.

HOUSTON Command pilot, 6, oral temp valid. After 10 minutes, crossover off.

S/C 7 Houston. Station Two back on the line and crossover still on.

HOUSTON Gemini 6, pilot blood pressure valid. Command pilot blood pressure. We're standing by.

S/C 6 Roger.

USTON Gemini 7, crossover off after 10 minutes.

S/C 7 Roger. Crossover off after 10 minutes.

HOUSTON Gemini 6, Houston. Place your tape recorder power circuit breaker off.

S/C 6 Six has power recorder circuit breaker off.

HOUSTON I'm sorry. That's in error. Place your tape recorder control circuit breaker off.

S/C 6 Roger. Control off. Seven, this is 6. Would you put on your Acq Lights on again for me, please.

HOUSTON Cuff is full scale, CP.

ANTIGUA Acquisition, Antigua.

S/C 7 Acq's on, 6.

S/C 6 Roger.

OUSTON Command pilot, 6. Pump your cuff up again. You pulled your cuff off...your bulb off. Cuff is full scale. Gemini 6, Houston. We'll be standing by for any time range; and if possible, address

59th data read outs between you and 7. Gemini 6, we have the command pilot's....

S/C 6 This is 6. Did you get the word on the data we have to range?

HOUSTON Roger. We'd request that information, but.....

END OF TAPE

S/C 6 — 7, this is 6. Would you flip on your amp lights again for me, please.

CAP COM — Cuff is full scale, CP.

S/C 6 — Acquisition lights on, please.

S/C 7 — Acq's on, 6.

S/C 6 — Roger.

CAP COM — Command Pilot 6, pump your cuff up again. You pulled your cuff out, your bulb off.

S/C 6 — Cuff is full scale.

CAP COM — Gemini 6, Houston, we'll be standing by for any time range, and, if possible, address 59 data readouts between you and 7. Gemini 6, we have the Command Pilot's..

S/C 6 — Get the word off the data. We have the range.

CAP COM — Roger, we request to have that information, please.

S/C 6 — Roger. The range at 20 hours GET or 215000 plus 22.24. The range 22 plus 00 00 was 17.63. The range of 22 plus 12 plus 00 was 16.33. The range of 22 plus 20 plus 00 was 19.55. The range of 22 plus 30, the range was 26.31.

CAP COM — Roger, Gemini 6. Could you tell me if spacecraft 7 is above your altitude or

below your altitude.

S/C 6 He is above our altitude.

CAP COM He was above you when you got those readings?

S/C 6 That is affirm. I have him in sight with reflected light here.

CAP COM You have him in sight with reflected light.

S/C 6 That's affirm. We have both acq lights and reflected light.

CAP COM Can you give me an estimate of the elevation angle?

S/C 6 ...but we want to get cleaned up in here. To track him only proves that we're able to rendezvous and we've done that. We'll have to get the cockpit stowed pretty soon here.

CAP COM Roger.

S/C 6 We know what radar range we have already. You want to give us an update on what the real retro time is?

CAP COM Gemini 6, Houston, understand. Will you have any non nominal stowage?

S/C 6 We're considering leaving the water bags in the right aft box instead of changing them to the left aft box. Otherwise, there will be a tangle.

CAP COM Roger. Water bags in the right aft as opposed to the left aft box.

S/C 6 That is correct. They will be where they were for launch.

CAP COM Roger. Same place that they were during launch. And I'd like to reverify that at the time these readings were taken Gemini 7 was above you.

S/C 6 That's affirmative.

CAP COM Thank you very much, Gemini 6.

S/C 6 They're about 4 or 5 degrees above. We can see them now.

CAP COM 4 or 5 degrees above. Thank you very much.

S/C 6 Could you give us an update on our 17-1 retrofire time? Just so we can prep up to it.

CAP COM Roger. 14 53 21 GMT. GET is 25 15 55. Gemini 6, Houston, did you copy?

S/C 6 Roger. We have a GMT of 14 53 51. GET, 25 15 55.

CAP COM Roger. That GMT is 14 53 21. Your GET is correct.

S/C 6 Roger. Got it.

CAP COM Gemini 6, Houston, please verify tape recorder power circuit breaker on, tape recorder control circuit breaker off.

S/C 6 That is affirmative. Our tape recorder power is off, controller is on.

CAP COM Thank you very much, Tom.

SURGEON Gemini 6, Houston Surgeon, you noticing some

effects on the activators yet?

S/C 6 — I'm using left heater.

CAP COM — Roger. Gemini 6.

S/C 6 — We slept cool, but everything was OK.

CAP COM — Roger. Copy, 6.

FLIGHT — Good morning, Capt. Schirra.

S/C 6 — Good morning, Chris. How's Paul?

FLIGHT — You're doing great. Let's put it down on the elevator.

S/C 6 — No. 3 or No. 2?

FLIGHT — Your choice.

S/C 6 — Roger. We'll try them both.

FLIGHT — Stand by. We'll have to change the target area.

S/C 6 — Good show getting us set up for that rendezvous. Before long and we'll be on the boat.

FLIGHT — Roger.

S/C 7 — Gemini 7.

S/C 6 — Go ahead, Jim.

S/C 7 — Want to make a wager on who comes closest?

S/C 6 — It's a bet.

FLIGHT — I need some payola there.

S/C 6 — We're going to make our bet out of contact with ground stations, I assume.

S/C 7 This is Gemini 7, did you observe us going over this morning?

CAP COM Gemini 7, say again.

S/C 7 This is Gemini 7, do you have a sighting of our spacecraft going over this morning?

FLIGHT IFR in Houston again.

END OF TAPE

This is Gemini Control. Gemini 7 is in its 176th revolution; Gemini 6 is in its 14th at 23 hours and 4 minutes on Gemini 6's flight; 281 hours and 11 minutes on Gemini 7's flight. We heard some conversation over Canary, let's play that tape for you now.

CYI Gemini 7, Canary Cap Com

S/C 7 This is 7, go ahead Canary.

CYI Roger, read you loud and clear, your status is go here on the ground, what's yours?

S/C 7 Crew status is go here in space.

CYI Okay, we have a BDA update for you, but we'd like ask a question first, we'd like to know when you're going to get out of your suit.

S/C 7 We're eating breakfast and we thought we'd clean up a little before we start getting out of the suit.

CYI Okay, very good, let me know when you're ready to copy.

S/C 7 We're ready now.

CYI 177-1. 281 47 18. 178-1 283 22 27. 179-4 286 15 35 180-4 287 51 14. Here's a goodies181-3 Charlie 289 08 41. 182-3 290 44 13. 183-3 292 19 45. REP 400K 21 ± 40. Weather is good in all areas.

S/C 7 Thank you.

CYI Roger.

HOU FLIGHT Canary Cap Com, Houston Flight.

CYI Go ahead.

HOU FLIGHT Okay, we'd like to get the 7 transponder off, We'd like to get the 6 radar off. And the 6 computer to prelaunch.

CYI Tha's 7 transponder off; six radar off; and what was the last one?

HOU FLIGHT Six computer to prelaunch.

CYI Roger Copy.

Gemini 7, Canary.

S/C 7 Go ahead Canary.

CYI Roger, will you turn off your transponder.

S/C 7 Roger cut it off.

CYI Gemini 6, Canary.

S/C 6 Rog, radar going off.

CYI Very, Very good. We'd like your computer on pre-launch.

S/C 6 Roger going to prelaunch.

CYI Roger, thank you.

HOU FLIGHT Do you have any tape motions Canary?

CYI Negative flight.

HOU FLIGHT Okay. How are the fuel cells doing on 7?

CYI Well, flight 2A is showing 1.05; 2B 2.22; and 2C 2.90.

HOU FLIGHT How about one?

CYI We're getting those now flight.

HOU FLIGHT See if you can get the onboard readings too please.

CYI Roger. Seven, Canary.

S/C 7 Go ahead Canary.

CYI We'd like the readouts on your readouts on your currents 2A, B, and C.

S/C 7 Roger 2A is really low. It's hanging about one volt below; 2 B is 2½ and 2Charlie is 3.

CYI Roger, what about one?

S/C 7 1A is four, 1B is five, 1C is four.

CYI Okay, we'll keep an eye on it.

Gemini 7, Canary.

S/C 7 Go ahead.

CYI Roger, will you turn your cross over switch off?

S/C 7 Roger.

CYI You have huh.

Flight Canary.

HOU FLIGHT Go ahead.

CYI Roger, we're getting .814 now on 1A.

HOU FLIGHT Say again.

CYI We're getting .814 on 1A.

HOU FLIGHT 1A?

CYI 2A flight.

HOU FLIGHT Okay.

Tell him to open circuit 2A please.

CYI Roger.

Seven, Canary, would you open circuit 2A?

S/C 7 Roger, 2A going open circuit.

HOU FLIGHT Have you got the open circuit voltage on 2A?

CYI Roger. I'll Give me an open circuit voltage on 2A please.

S/C 7 Roger. 29.5.

CYI Roger. Is it steady?

S/C 7 .....(garble) is 29.8.

CYI Roger. We'll keep that open for a while okay?

S/C 7 Right.

HOU FLIGHT Tell him to keep an eye on that and we'll contact him again over Carnarvon.

CYI Roger flight.

Seven, let's leave that 2A open circuit and keep an eye on open circuit voltage and we'll take a real close look at at Carnarvon.

S/C 7 Will do.

HOU FLIGHT He can put 2A on in fifteen minutes.

CYI Fifteen minutes.

Tell you what, why don't you 2A back on line 15 minutes, 15 minutes.

S/C 7	2A back on the line in 15 minutes. Roger.
CYI	Roger
	Sorry we don't have too much for you there
	six.
S/C 6	We really regret we don't have any fuel cells.
CYI	We copy that.
HOU FLIGHT	Good show Canary.
CYI	Roger, thank you.
HOU	Canary LOS, Gemini 7 and 6.

END OF TAPE

This is Gemini Control. Gemini 7and 6, two spacecraft are half way around the World, or nearly half way around the World. Gemini 7 on its 176 revolution at 281 hours and 20 minutes into its flight. Gemini 6 in its 15 revolution at 23 minutes...23 hours and 12 minutes into its flight. The retros aboard Gemini 6 are going to be fired at 8:53 a.m. Central Standard Time this morning, plus or minus a few seconds; 8:53:21, I believe they said the last time. The splash down time for the 17-1, that's the recovery area at the beginning of the 17th revolution, for Gemini 6. They would land there at 9:30, that's south of Bermuda, east of Cape Kennedy. Right now, both spacecraft are over the middle of the Indian Ocean awaiting contact with our Carnarvon Station, on the west coast of Australia. There have been no unusual reports this morning, but there has been a lot of activity aboard both spacecraft. Primarily because of the preparations for retrofire aboard 6; and because the usual morning purging and peping up of fuel cells that goes on every day aboard Gemini 7. So, at 281 hours and 21 minutes into 7's flight, and 23 hours, 13 minutes into 6's flight, this is Gemini Control.

END OF TAPE

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This is Gemini Control at 281 hours and 37 minutes into the flight of Gemini 7, 23 hours and one-half into the flight of Gemini 6. Both spacecraft crossing the east coast of Australia headed toward Canton Island. We are getting ready to bring Gemini 6 back into the 17-1 recovery area in about - at about 9:30 a.m. this morning, central time. Meanwhile the U.S. Weather Bureau Spaceflight Meteorology Group said that weather conditions remain satisfactory in the areas of primary concern for continuation of the Gemini 7 flight for the next two days, and probably for the remainder of the mission. In the Western Atlantic zone, centered about 800 miles east of Miami skies will be partly cloudy with northerly winds about 10 knots and seas 3 feet. In the mid-Pacific landing zone, centered about 800 miles northeast of Honolulu, skies will be mostly cloudy with widely scattered showers, winds easterly 15 to 20 knots and seas 6 to 8 feet. In the Western Pacific landing zone, centered about 700 miles south-southwest of Tokyo, mostly cloudy skies will prevail with scattered showers. Winds will be northerly 20 to 25 knots and seas will range up to 8 feet. In the eastern Atlantic landing zone, centered about 500 miles north of the Cape Verde Islands, skies are expected to be partly cloudy, winds east at 15 to 20 knots and seas 5 to 6 feet. Both spacecraft now starting their cross of the South Pacific. They have just passed the Carnarvon Tracking Station where we had communication with them. Let's hear that conversation now.

CRO — Carnarvon has TM contact.

Flight — Roger, Carnarvon.

Cap Com — Gemini 7, Houston. Gemini 7, Houston. Hello Gemini 7, Houston. Gemini 7, Gemini 7, Houston. Gemini 7, Gemini 7 Houston.

CRO — TM solid.

Flight — Roger.

CRO Gemini 7, Carnarvon Cap Com. We have a valid temperature, standing by for your flood pressure.

CRO Surgeon Gemini 7, this is Carnarvon Surgeon. Standing by for your blood pressure.

S/C 7 Coming down.

CRO Cuff is full scale.

CRO Surgeon We have a valid blood pressure.

S/C 7 Mark on the exercise.

CRO Cuff is full scale.

CRO Surgeon Gemini 7, I have a valid blood pressure.

Would you give us your food, water, and sleep report, please.

S/C 7 Roger, Command Pilot has had 949 ounces of water, last night we had meal day 9 meal C, this morning day 13, meal A and the Command Pilot did not eat the sausage. Total on column 6 is 31 for the Command Pilot, correction, column 6 is 6.

CRO Surgeon Would you repeat a little bit slower.

S/C 7 Roger. 949 ounces of water. Last night, day 9, meal C. This morning day 13 meal minus the sausage for the Command Pilot, column 5, 31, total column 6, 6.

CRO Surgeon And your sleep report please?

S/C 7 Roger, about 5 hours of moderate sleep.

CRO Surgeon What was the water for the pilot please.

S/C 7 The Pilot has had 796 ounces, same meals except he ate everything. Total of column 5 is 28, column 6 is 6. And the same amount of sleep.

CRO Surgeon Would you confirm the reason for loss of bio-med recorders from the Pilot is changing suit.

S/C 7 That's correct.

CRO Surgeon Thank you. Carnarvon Surgeon out.

CRO Gemini 6, Carnarvon Cap Com.

S/C 6 This is 6.

CRO Roger. I have an update for your RN minus RP for your area 17-1 if you are prepared to copy.

S/C 6 Stand by. Go.

CRO Roger, bank angle, 00 degrees, RN minus RP plus 107, bank angle 44 degrees. RN minus RP, bank angle 90 degrees, RN RP minus 197, do you copy.

S/C 6 Roger ... (garbled)...

CRO Say again Gemini 6.

S/C 6 ..... (garbled) ...

Flight What did he say there.

CRO Gemini 6, Carnarvon Cap Com. You are breaking up on us. Could you say again please.

S/C 6 Roger, roger. On these updates, we didn't receive .... (garbled) would you repeat it.

CRO Roger, say again. For area 17-1, bank angle 00 degrees, the RN minus RP will be a plus 107, second reading, bank angle, 44 degrees, the RN RP will be 0, the third one. At 90 degrees bank angle RN minus RP will be a minus 197. Do you copy.

S/C 6 Roger. I copy. 17-1, bank angle 00 degrees, RP + 107, bank angle of 44 degrees RN minus RP 0, 90 degrees bank angle, RN RP minus 197.

CRO That's affirmative. You are looking good from the ground.

S/C 6 Roger, we have just completed stowing our major stowage items.

CRO Flight, Carnarvon. On these fuel cells, main A - I mean Main 1 is carrying 10.7, main 2 is carrying 4.6 .

Flight Roger.

CRO Our Q6 here, has an optical sighting of both spacecraft during

of both spacecraft during that last pass.

Flight Did you see them separately?

CRO That's affirm.

This is Gemini Control Houston, your friendly Red Team has arrived on the scene and since we've been in the room we've been advised that splash time will be approximately 2 minutes later and we cannot presently account for any change in retro time, but we are carrying splashdown now at 9:30, I believe 9:28 had been quoted earlier. We will get better information on these numbers. Elliot has put in a call to 7, via Canton Island right now and let's tune in there and see what is going on.

S/C 7 Say again Houston.

Cap Com Did you say you are ready to copy.

S/C 7 Houston, go ahead.

Cap Com Roger, time 283 23 18, pitch 10 degrees down, yaw 0 degrees, photograph GT-6 retrofire and reentry. This time is GT-6 retrofire. Time 283 30 00, power up platform over Hawaii. A pumps on prior to power up. S-5, time 284 15 00, mode 01, pitch down 90 degrees, then yaw 20 degrees left, South Africa. MSC-4, 285 03 51, sequence 06, mode 01, pitch 30 degrees down, yaw 27 degrees right, go to mode 03 when station acquired. Time 285 16 00 fuel cell purge and power down. Do you copy.

S/C 7 Roger, we copy.

Cap Com We'll keep an eye on section 2 and we may have to delete the platform power up.

S/C 7 Roger. 2 Charlie is one amp now, I think we are finally losing section 2.

Cap Com Roger, we are continuing to watch it with you.

S/C 7 Okay.

Cap Com Gemini 7, if 2 Charlie goes below 1 amp, take it off the line also.

S/C 7 Roger.

Cap Com Gemini 7, confirm you are on standby transmitter with real-time telemetry and we want you to remain on this until the end of rev 178, so Kwajalein can record your D4 data on their standby frequency.

S/C 7 We are on their frequency.

Cap Com Roger.

S/C 7 Houston. Do you want us to put these stacks back on after we open circuit it?

Cap Com Roger, after being open 20 minutes, try putting them back on again.

S/C 7 Roger.

This is Gemini Control Houston. That will wrap up the conversation via Canton. At 281 hours 52 minutes into the flight of 7, and Schirra and Stafford have been up there now 23 hours 44 minutes. This is Houston.

END OF TAPE

This is Gemini Control, Houston. 282 hours, 18 minutes into the flight of 7; 24 hours, 11 minutes into the flight of 6. For nearly 2 weeks now, we've been beaming daily, music up to our pilots, 2 for most of the time, 4 for the last 24 hours. This morning, the pilots got their revenge. Listen carefully now to the early part of the Stateside pass when the Gemini 6 crew reversed the process.

GYM Guaymas has solid TM on both spacecraft. Both spacecraft are go.

HOUSTON Roger.

GYM It looks like 2B and 2C are dividing the load pretty evenly.

HOUSTON Roger, Guaymas.

S/C 6 Gemini 7, Gemini 6. Can you see us?

S/C 7 Negative. Sure can't.

S/C 6 You can now, can't you?

S/C 7 No, I sure can't, Wally.

S/C 6 We're in the light. We'll put the docking light on.

S/C 7 We're just drifting. I don't know which way we're looking.

S/C 6 Okay. Houston Cap Com. Can you read Gemini 6?

HOUSTON Guaymas, AFD. We're going prime for voice.

GYM Roge.

HOUSTON Texas go remote.

TEXAS Texas remote.

S/C 6 Gemini 7, this is 6. Would you place your Acq Light on please?

S/C 7 Roger. Done.

HOUSTON Gemini 7, Houston. Did you call?

S/C 7 Hello, Houston. We just want to know if you're up on the air today.

HOUSTON Roger.

S/C 6 Roger, Houston and Gemini 7. This is Gemini 6. We have an object, looks like a satelite, going from north to south, up in a Polar orbit. He's in a very low trajectory, traveling from north to south. And, it has a very high fineness ratio. It looks like it might even be a ball of sticks. It's very low; looks like he may be going to re-enter pretty soon. Stand by one; it looks like he's trying to signal us. (Jingle Bells played by harmonica and bells.)

S/C 7 We got them too, 6.

S/C 6 That was live, 7; not tape.

HOUSTON You're too much, 6.

S/C 6 Da Da De Da De.

S/C 7 Houston, 7 here.

HOUSTON Go ahead.

S/C 7 We've had to take 2A off the line 3 straight times now. I suggest we leave it off.

HOUSTON Roger. What's your open circuit voltage showing now, Frank?

S/C 7 31 volts. And, I'd also like to delete the platform power up to make this thing go 14 days.

HOUSTON We may cancel that platform power up as I told you, depending on how Section Two is looking at that time. We'd like to keep the option open at this time; and we also want to keep the option open on 2A. We want to keep trying it.

S/C 7 2C is almost below 1 amp, also.

HOUSTON Roger. We copy.

S/C 7 And, Lovell has got the thermometer in his mouth.

HOUSTON Roger. Seven, the temperature is coming up, and also the open circuit voltages indicate that these should be good cells, so we aren't ready to give up on them yet.

S/C 7 Okay.

HOUSTON Gemini 6, stand by for an update on your computer for a retro. Are you ready to accept it?

S/C 6 Gemini 6. Affirmative. We are in pre-launch.

HOUSTON Roger. You're ready.

S/C 6 Elliot, if you send that update again, we'll take it. We moved out of pre-launch, and then back to pre-launch.

HOUSTON Roger. We'll send it again.

S/C 6 Okay, Elliot.

HOUSTON Gemini 6. I'm ready to give you a read out on the MDIU quantities so that you can check them. Are you ready to copy?

S/C 6 Stand by one second, Elliot.

HOUSTON Gemini 7, you can take the oral temp probe out of your mouth. We're not getting a satisfactory reading now.

S/C 7 Roger.

S/C 6 Gemini 6 is ready to copy.

HOUSTON Roger. Address 03 385-49. Core 04, 613-88. Core 05, 075-13. Core 66, 653-84. Core 07, 359-99. Core 08, 400-14. Are you copying, 6?

S/C 6 Got all through 6. You cut out on 7. Repeat core 7 on. You faded out.

HOUSTON Roger, Tom. Core 07, 359-99. Core 08, 400-14. Core 09, 124-21. Core 10, 023-46. Core 11, 292-17. Do you copy?

S/C 6 Roger. Copied all of them. We'll check the MDIU.

HOUSTON Okay. Why don't you read back those real quick, Tom.

S/C 6 Roger. 03 was 385-49. 04 is 613-88. 05 is 075-13. Core 66 653-84. 07, 359-99. 08, 400-14. 09, 124-21. Core 10, 023-46. Core 11, 292-17.

HOUSTON Roger, Tom. For your information, our TM verifies this; and we have ran out of solution, and it looks good. Would you read 03 back. I was interrupted. I did not get your read back. I think it was correct.

S/C 6 Roger. 03 is 385-49.

HOUSTON Roger. They all check, Tom.

S/C 6 Okay. We're go.

HOUSTON I've got an area 17-1 update for you also, when you're ready to copy.

S/C 6 Go.

HOUSTON GET RC 25:15:58. RET 400K, 20 plus 15. RET RB 26 plus 38. Bank left 55. Do you copy?

S/C 6 Roger. In area 17-1: GET RC 25:15:58; RET 400K 20 plus 15. Reverse bank 26 plus 38. Bank left 55 degrees.

HOUSTON Roger. That's correct, 6.

ANTIGUA AOS, Antigua.

HOUSTON Gemini 6. We want to try another tape dump here. Just one more try. Would you place your tape recorder control circuit breaker on. And, verify the tape recorder power circuit breaker on.

S/C 6 Roger. Tape recorder power and control circuit breakers are on.

HOUSTON Roger.

S/C 6 Houston, Gemini 6. All cores checked that you sent up to us.

HOUSTON Very good, 6. Gemini 7, Houston.

S/C 7 Go ahead, Houston.

HOUSTON We're going to catch your crew status report on another pass. We're not receiving you data anymore since your past Texas and we had to do the re-entry updates on 6.

S/C 7 Roger. We're going to try to put 2A back on the line again now.

HOUSTON Roger. Is the open circuit voltage up any?

S/C 7 Negative. 31.2.

HOUSTON 31.2. Roger. Gemini 6, Houston. How are you coming on the retro preparations? You getting everything stowed away?

S/C 6 Roger. We have one camera out; and we'll throw it down in the box when we're on the other side.

HOUSTON Very good. Don't let that satelite get away from you.

S/C 6 Looks like we're going to get away from him.

S/C 7 Houston, 7 here. It goes immediately down to about half an amp.

HOUSTON Roger. Take it off again for 20 minutes.

S/C 7 Roge.

HOUSTON Gemini 6. We had no joy on your tape dump. We'd like you to place the tape recorder power circuit breaker off. You can leave the control circuit breaker on.

S/C 6 Roger. Power off. Control on.

HOUSTON Roger, Tom.

S/C 6 Houston, Gemini 6. Do you have the .....(Faded).....

HOUSTON You're very weak, 6. Say again.

S/C 6 Roger. Do you have the latest nominal IVI reading with the read outs?

HOUSTON The same as we gave you pre-flight. The 308 number.

S/C 6 Houston, this is 6. ...(Garble)...

HOUSTON Say again, Tom. You were just a little fast there. Something about stowage.

S/C 6 Roger. Give us the IVI numbers if you can. We've stowed that book already.

HOUSTON Roger. It's 308 aft. Stand by. And 117 down.

S/C 6 Roger. That's 308 aft and 117 down.

HOUSTON Roger. Gemini 7, Houston.

S/C 7 Go ahead, Houston. Go ahead, Houston, 7 here.

HOUSTON Stand by a minute, 7. Gemini 7, Houston.

S/C 7 Go ahead, Houston.

HOUSTON We'd like to have you put 2A back on the line and leave it on there for 20 minutes even though it is below 1 amp. We'd like to see if it doesn't come up some.

S/C 7 Roger.

HOUSTON If it stays below 1 amp for 20 minutes, then take it off the line again, for 20 minutes.

,/C 7 Roger.

HOUSTON And, we'll be checking with you again at Kano.

S/C 7 Roger.

HOUSTON Gemini 7, Houston.

S/C 7 Seven here.

HOUSTON Could you confirm your suit configuration on both pilots?

S/C 7 Roger. We're in a state of transition. I'm out of my suit completely, and it's already stowed; and Frank is in the process of getting out of his.

HOUSTON Roger, 7.

ANTIGUA LOS, Antigua.

This is Gemini Control here. According to unconfirmed reports in this Mission Control Center, that was Wally Shirra playing a space qualified harmonica, and Tom Stafford on the bells. This is Gemini Control, Houston.

END OF TAPE

HAW TM solid on Gemini 6 at Hawaii.

Flight Roger, Hawaii.

HAW Radar track Gemini 6, Hawaii intermittent.

Flight Rog.

HAW Gemini 6, Hawaii Cap Com.

S/C 6 Go Hawaii.

HAW How are you doing this morning.

S/C 6 Very good, just about squared away for retro.

HAW Very good. We are showing you go down here on the ground and I don't have anything for you. Do you need anything.

S/C 6 Negative, we want to check with .. (garble) flying across the States.

HAW Roger, understand. If you need anything, give me a call.

S/C 6 Okay, thank you Hawaii.

HAW 7, Hawaii.

S/C 7 This is 7, go ahead.

HAW Good morning. How are you doing.

S/C 7 Oh, we are working on a little dim-light photography.

HAW Okay, just give me a count off your water gun.

S/C 7 Right, our water gun is 4210.

HAW 4210, roger. And we are solid on 7 Hawaii.

Flight Rog.

HAW Looking real good flight.

Flight Roger. Ask him what the open circuit voltages are on the 2 circuits he has open.

HAW Okay. 7, could you give me the open circuit voltages on the 2 stacks you have open.

S/C 7 We only have one stack open, 2A is 31.2.

HAW Roger. Copy.

Flight Rog. Stay up there.

HAW We've had LOS on all systems anyway.

Flight Roger. Guaymas Cap Com, Houston Flight.

Guaymas Houston Flight, Guaymas Cap Com.

Flight Have you been copying all.

END OF TAPE

This is Gemini Control Houston. Over the Canaries we had more conversation. It went like this.

HOU FLIGHT — Canary, Houston Flight.

CYI — Go ahead flight, Canary.

HOU FLIGHT — Would like to have you tell spacecraft 7 to keep his eye on spacecraft 6 adapter after spacecraft 6 separates the adapter.

CYI — Okay.

CYI SURGEON — The absence of biomed data on the command pilot is that he's getting into his suit.

S/C 7 — That's affirmative..... off.

CYI — Roger, thank you.

Seven, Canary.

S/C 7 — Go ahead.

CYI — Okay, we'd like to give you a little word here on -- we'd like for you to keep an eye on spacecraft 6 adapter as it separates.

S/C 7 — We'll do our best and by the way 2A is holding on ½ amps.

CYI — Roger, we monitored that on the ground.

HOU FLIGHT — What did he say there?

CYI — He said it was under half an amp, flight.

HOU FLIGHT — Roger.

CYI SURGEON	Your blood pressure is valid.
HOU FLIGHT	Let's leave it on for a while.
CYI	Mark exercise.
S/C 7	Rog.
	Blood pressure coming down.
HOU FLIGHT	What are you reading on the ground on 2 Alpha?
CYI	Say again flight.
HOU FLIGHT	What are you reading on the ground on 2 Alpha?
CYI	.814. 2 Bravo, 2.62; 2 Charlie .954.
HOU FLIGHT	.954?
CYI	That's affirmative, 1954 on 2 Charlie.
HOU FLIGHT	Let's leave them on for a while.
CYI	Roger, flight.
CYI SURGEON	We have a valid blood pressure, Canary Surgeon, here
CYI	Seven, Canary, let's leave all three stacks up for a while. Okay?
S/C 7	Righto. Let's see 2 C is still one amp, and 2A is still a little less than one amp.
HOU FLIGHT	Flight, Canary, we got all of that.
HOU FLIGHT	Roger, Canary.
CYI	Have LOS of six.

END OF TAPE

This is Gemini Control Houston 24 hours, 33 minutes into the flight of 6 and we have some adjustments for you on the retro sequence. Retrofire itself now is planned to take place at 8:53:24 CST. That's 8 hours, 53 minutes, and 24 seconds. The spacecraft should reach 400,000 feet which is the beginning of thickening atmosphere at 9 hours, 13 minutes, 40 seconds. The period at which blackout should begin is 9 hours, 16 minutes, 42 seconds. The time to start reverse bank, maneuver onboard, 9 hours, 19 minutes, 56 seconds. The time of end of blackout, 9 hours, 21 minutes, 30 seconds. The time at 50,000 feet, 9 hours, 23 minutes, and 8 seconds -- make it, the number is not quite readable. We'll have to correct that here. Main chute opening, 9 hours, 24 minutes, 51 seconds. Landing, 9 hours, 29 minutes, and 12 seconds. Retrofire is to take place 700 miles northwest of Canton Island on this revolution. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control Houston. We're 24 hours, 22 minutes into the flight of six. I want to confirm that missing number that we had in earlier retrofire sequence. The number for the time for 50,000 feet is 9 hours 23 minutes 08 seconds CST. The weather report from the carrier is excellent. Couldn't have a prettier day out there. The seas are described as calm, gentle swells of as much as three feet, it's a bright sunny day, 76 degrees, clear sky, 10 miles visibility, 1/10th cloud cover, and three knot winds. Just about as near perfect landing conditions as we could have asked. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control Houston 24 hours, 53 minutes into the flight of 6, and 6 and 7 are running very close together -- within, say, 40 miles over Carnarvon. Coming up very shortly on this retrofire sequence. Carnarvon has been updating Wally Schirra and Tom Stafford on the landing conditions about 795 miles southeast of Miami which is the planned touchdown point. Let's cut in there and find out what's going on.

FLIGHT Rog.

S/C 6 We're not going to be able to purge on this pass.

FLIGHT OK. Don't have enough time?

S/C 6 That's affirmative, Flight. We could probably get one section purged.

FLIGHT Why don't you just give them the instructions and let them do it?

S/C 6 All righty.

CRO Gemini 6, Carnarvon Cap Com.

S/C 6 Go ahead.

CRO During retrofire, go ahead and use both rings. After retrofire, turn ring B off and do not confuse it with ring A unless both rings are required for attitude control.

S/C 6 Roger. That's what I wanted to do.

CRO Roger. And they do not want you to dump it

after drogue deploy.

S/C 6 You mean the fuel supply?

CRO That's affirmative. 10 seconds. 3-2-1. Mark.

S/C 6 I'm with you.

CRO Roger. Your T_R is right in sync with them.

S/C 6 You want to keep the fuel lines, don't you, Flight?

FLIGHT That's affirmative. Clear the lines, but leave the motor valves off.

CRO Flight says on the ring B -- clear the lines but leave the motor valves off.

S/C 6 Roger. That's the normal procedure. Thank you.

CRO Roger. Gemini 7, Carnarvon Cap Com.

S/C 6 This is us, Jim.

CRO Roger. We'd like to have you check the open circuit voltages on that section 2.

S/C 6 Roger. We're just trying to put 2A back on the line, but it went below, almost to zero. The circuit voltage now is 30.2 amps.

CRO Go ahead and purge it.

S/C 6 Do you want us to burn test 2B and 2C on the circuit?

CRO That's negative. That's OK. Go ahead with the purge on it.

This is a normal purge on the complete two sections.

S/C 6 Roger. Doing section 1 first.

CRO Be advised, 7, that if you are having trouble with that section 2, you will not do the power up over Hawaii.

S/C 7 Roger.

S/C 6 We have 2A off the line now. Do you want us to put it back on the line and purge it?

FLIGHT Affirmative.

CRO That's affirmative.

S/C 6 Good.

Carnarvon, our PQI reading is about 29 percent.

CRO That's affirmative, 6.

FLIGHT We copy.

CRO Roger, 6. Flight, when he hit that circuit breaker, we had brief indication of tape run.

FLIGHT Yeah, that's what we've been getting.

CRO OK.

MCC This is Gemini Control Houston. That apparently wraps up the conversation over Carnarvon. We're standing by for retrofire which should take place in about 15 minutes from now. This is Gemini Control Houston.

CRO Section 1 purge has been completed and it looked good.

FLIGHT Rog.

CRO Gemini 6, Carnarvon Cap Com. We'll have LOS shortly. You are looking good here on the ground. We'll see you back at the ranch.

S/C 6 Roger. I'll sing for you "It's a Good Day".

CRO Roger. With our pleasure. Carnarvon bids you good bye.

S/C 6 Roger. It will be a good day.

END OF TAPE

HOU Tananareve go remote.

TAN Tananareve remote.

S/C 6 Tanareve, Gemini 6. Request a time hack on .....(garble)...

TAN Roger, Gemini 6, this is Tananareve, on my mark it will be 14 14 30. 321 mark.

S/C 6 Roger. Could you give me ground elapsed ....(garble)

TAN Couldn't understand, say again 6.

S/C 6 Roger, could you give me a ground elapsed time on 6.

TAN Negative, we don't have ground elapsed time on 6.

HOU FLIGHT Tell him we'll give him that over Carnarvon.

TAN Roger

TAN Did you copy that Tananareve?

HOU FLIGHT Carnarvon, Houston Flight.

CRO Okay.

HOU FLIGHT This is spacecraft 7 information. We have a purge scheduled at your site. Before the purge you want to check the open circuit voltages.

CRO That's this pass?

HOU FLIGHT That's affirmative. If you can do, if not, we'll postpone it until Hawaii.

CRO Rog.

OU FLIGHT If you can't do it and you're the complete judge of that, the main problem at the time is

spacecraft 6, I agree with you. But if you get through and you think you have time, then do it. Stand by on that. Let me think about that for a while. Maybe we'd better postpone the whole thing until Hawaii and give you a chance to do the whole bit with 6. Stand by.

CRO I've got 9 minutes and 17 seconds roughly on this. Should be plenty of time to get it all in.

HOU FLIGHT Okay. I'll continue on then.

CRO Rog.

HOU FLIGHT Want to check the open circuit voltages. If they're okay, then we want to go ahead with the purge on all three stacks, if the open circuit voltages are down below about 29 or 30 volts, or let's say 30 volts, then we don't want to do the purge on those stacks that have open circuit voltages below that. But you would purge the stacks that were above that. Okay? Now if you have problems with.....

CRO Both sections or just one section you want to purge?

HOU FLIGHT No, we want to purge both sections.

CRO Rog.

HOU FLIGHT Okay, now if they have problems with stack 2 Alpha, we do not want to go ahead with the power up. And I suspect that's going to be the case.

CRO Okay, on GT-7, we want a purge on both sections. Before we start the purge we want to check the open circuit voltages. If the open circuit voltages are above 30 volts, we'll go ahead with the normal purge, on both sections. If any stacks are below 30 volts, we will not purge those particular stacks. If section 2 A is -- Section 2 is no good, we will not power up over Hawaii.

HOU FLIGHT If any of the stacks are not up we don't want to power up.

CRO Rog. And we expect this to be the condition

HOU FLIGHT Say that again.

CRO And we expect that to be the condition of bad stacks.

HOU FLIGHT That's correct and we want to check the open circuit voltages on the ones that are presently open circuited.

CRO Rog.

F Carnarvon, AFD.

CRO AFD, Carnarvon.

HOU Okay, on six, we also want two OBC's and an A and a B.

CRO Two OBC's an A and a B, and a main. Right.

HOU Rog, and a main.

HOU FLIGHT Carnarvon, Houston Flight.

CRO Go ahead flight

HOU FLIGHT That's work six first and if you get into problems that takes any length of time and you're concerned about the time getting all this done on seven, tell him to postpone the purge and we'll do it at some later time.

CRO Roger, will do.

END OF TAPE

This is Gemini Control Houston at 25 hours 4 minutes into the flight of 6 and all the times and values are holding up for the retro-fire maneuver. No changes, while the computers have made their final quick refresher run to make sure of the accuracy of all elements. This is Gemini Control in Houston standing by.

END OF TAPE

This is Gemini Control Houston at 25 hours 8 minutes into the flight of 6 and we are about 7 minutes away from retrofire. We should have voice communication on that via Canton Island. The pass takes it well north of Canton Island but we have been getting reception over the last 2 weeks roughly if that area. We are hopeful today. All the values still remain as was posted earlier and we'll come back to you when we are very close to the retrofire time. This is Gemini Control Houston.

END OF TAPE

This is Gemini Control Houston at 25 hours 14 minutes and we are standing by for that retro maneuver. Spacecraft 7, of course, will have a most unusual seat to watch this maneuver, 6 is slightly below and ahead of them and they have got their film cameras ready in the 7 windows. Elliot See has just called up MARK, 1 minute. 30 seconds to retrofire. 10, 8, 7, 6, 5, 4, 3, 2, 1. No voice communication yet via Canton. We are standing by. Schirra confirms, retrofire complete. Schirra calls out his incremental velocity readings as 309 aft, 1 down, and 166, I believe, 116, I'm sorry, which is exactly the nominal reading that should have come out of that maneuver. The Flight Director and Retro are completely happy with that retrofire maneuver. We've not heard from 7 as to how they made out on any pictures. Schirra has confirmed all the events leading up through and concluding retrofire. Now Hawaii has raised 6. Schirra says all four retros went automatically and they seemed to be right at the desired thrust. 6 is talking to Hawaii right now. We have not had any communication with 7, we are hopeful to get some in a minute or two, and find out how it looked to them. Hawaii has a good radar track. Hawaii is sincing their clocks with the spacecraft 6. Schirra says we are all squared away and thanks Hawaii. If 7 did get pictures of those movements it would be an intricate tracking task because the retro adapter would leave first at retrofire minus 30 seconds and then immediately after retrofire the retro adapter section, the smaller section closer to the spacecraft would leave, and the separation distance is rather abrupt and quick and we are sure it would take some pretty sharp tracking but 7 has proved that they are capable of sharp tracking. Wally Schirra, an old Navy Pilot says if he can't go into the Pacific fleet where he went after his first Mercury Flight, he will proceed into the Atlantic. This is Gemini Control Houston here. Hawaii has raised 7 now and in the course of the conversation Wally Schirra bid farewell to the 7 pilots and said he would see them shortly back at the Cape. 7 advised that apparently just after leaving the Carnarvon

Station they ran into some trouble with their number 3 and 4 thrusters. These are the yaw right thrusters. They also said due to that trouble they got no pictures. We don't know whether it's an all inclusive statement, or whether they ment very precise pictures, the report from them was We didn't get your picture. Hawaii Cap Com is reviewing the numbers of the distances, the altitudes that events should occur as 6 ..

END OF TAPE

HANEY ....the Cap Com is reviewing the numbers of the distances, the altitudes, the events that should occur as 6 proceeds down toward earth.
Hawaii advises that both astronauts look well on the ground, the biomedical data; they also told Schirra and Stafford they have nothing further, and they'll be seeing them.

California should acquire 6 at 6 minutes after the hour. We will be remoting through Houston during that early portion, Guaymas will acquire about a minute after California.

This is Gemini Control Houston - still no report from Schirra and Stafford as they approach the west coast of the United States. California has been advised to go remote, and within 30 seconds we should have a communication. Now we have raised 6, Elliot See is having a quick chat with Schirra and this is how it sounds.

CAP COM You're looking real good, Wally, the computer situation looks real good from here.

S/C/6 Very good.

This is Gemini Control Houston. Apparently no further conversation as the two get ready for this all-important steering maneuver in an attempt to bring that spacecraft down just as close to the Wasp as possible.

END OF TAPE

This is Gemini Control Houston. Our altitude clock presently shows 6 at 80 miles altitude. While Elliot See is checking in with 7 to find out how severe his loss of thrusters 3 and 4 is. He says not bad. He can control the attitudes by pitching and rolling. Number 3 and 4 thrusters reportedly went out just prior to retrofire on spacecraft 7, not 6. 6 has been advised that the helicopters are airborne now in the Atlantic and spacecraft 6 simply rogers confirming receipt of the information. Our plots here show the spacecraft approximately over El Paso Texas and at an altitude of approximately 60 miles. This is Gemini Control here. We have reached the 400,000 foot mark and in the next few seconds most of the steering, the lift capability of the vehicle will be brought into play. It is approximately some 300,000 to 200, 000 that the greatest advantage can be taken of the lift capability in Gemini. Schirra is repeating back some backup bank angles and roll angles, should their guidance computer equipment go out on the -- in the midst of the maneuver they would go to these angles and utilize them to put them down in the place where we want them out in the Atlantic. We are a little more than a minute away from the point in the reentry when communications will be blacked out as the ionized sheath envelopes the spacecraft in its plunge back toward earth. That is to occur at 16 minutes 42 seconds after the hour. All right, now they have entered the point where communications are not possible. They are estimated they will emerge from this blackouted configuration at 21 minutes 31 seconds after the hour. There is just a steady hum on the line here. Elliot See now is putting in a call to the Gemini 7 advising them that 6 is in blackout. 7 says they are just drifting, they are not attempting to control attitudes, they are not going to watch for this reentry.

END OF TAPE

This is Gemini Control Houston. We're about two minutes away from the planned emergence from this blackout period. We've been having a little conversation with 6 getting more information on their thruster problem. We'll be able to recap on that after this reentry is completed. Now the Wasp, we've been advised, has radar contact with the spacecraft. We still have not heard from it.

Grand Turk has acquisiton on 6. Elliot See is putting in a call. Stafford comes back with a first call from Elliot See, "We read you loud and clear."

Six is being advised they have radar contact from the Wasp. Radar has them in view. Schirra says the altimeter is off the peg. We're about 10 seconds to drogue.

There's the drogue. The drogue is out. And Air Boss I has just put in a call, Air Boss is an airplane in command of Commander D. A. Barksdale of North Kingston, Rhode Island. He's slightly uprange from the Carrier Wasp.

Elliot See is asking 6 for a readout as to how the reentry went on his needles and his eight ball onboard. But this is the point where communications get a little sticky. We'll probably have to wait for that word when they're back down on the water. There is no answer from 6.

The Wasp advises they're tracking the spacecraft now. They have a plot of about something over 30 miles. According to our information we should have main chute. We've had no visual report from the carrier. The radar plot from the carrier says it's about 33 miles from the Wasp.

END OF TAPE

The aircraft designated The Air Boss One is operating about 15 miles west of the carrier WASP. They've advised they do not yet have 6 in sight.

The Air Boss One and Gemini 6 are now in communication. It's very difficult to understand the conversation here, but we did hear 6 call out they're at 6,000 feet just a few seconds ago.

The WASP advises they are now 2,000 feet.

Approximately 1,000 feet.

The WASP now estimates the landing point at 30 miles, 30 miles west of the WASP back toward Miami. Air Boss, a correction on its earlier position, it is located about 15 miles west of the point where the spacecraft is landing.

Now the WASP is turned in the direction of the landing area. They are moving on it at a rate of 25 knots.

We show a splash time in here on our board at the Mission Control Center at 29 minutes and 9 seconds after the hour.

Still no visual contacts, but we are satisfied they're on the water.

The WASP advises that they have accelerated their speed. They are moving at 32 knots and we're standing by.

This is Gemini Control Houston. Now we do have a visual contact. Air Boss One has a visual contact. He

should be approximately over 6. He is in voice communication with the 6 pilots.

END OF TAPE

This is Gemini Control Houston. We're advised that one of the swimmers has inflated a liferaft just off -- just very close to the spacecraft and the other swimmers, they operate in teams of three, are moving out near the spacecraft to retrieve the R & R section, the reentry and rendezvous section which contains electronics and other elements which we're very intersted in getting back, which will give us a good deal of information on the total reentry performance of this Gemini 6 spacecraft. This is Houston standing by.

This is Gemini Control Houston. Now the Wasp has the search helicopters hovering over the Gemini 6 spacecraft in sight and they're closing on the scene. There are indications that the parachute was not jettisoned, apparently the crew selected to try to save the parachute It's not presenting any problem pulling them around or under the water. So, they're leaving it attached to their spacecraft. Spacecraft 7, meanwhile, is down over the southern tip of Africa. We've had no communication with it since it left the states.

The 6 crew has advised that they are in good spirits, good health and they're talking directly with the Wasp now. They say they can't wait to get onboard.

Gemini 6 advised they're riding very smoothly and very comfortably on those very calm seas out there today, gentle swells of about three feet, was the report about half an hour ago.

This is Gemini Control Houston. Spacecraft 7 has just been raised by Elliot See. He has advised 7 that 6 is down safely on the water and is standing by for pickup.

This is Gemini Control Houston. We're advised that the Wasp is slowing down, it's down to about 20 to 23 knots. It's seven to eight miles from the spacecraft and they're beginning to make their approach on the craft.

This is Gemini Control Houston. We're advised that the swimmers are now beginning to attach the collar around the 6 spacecraft.

END OF TAPE

This is Gemini Control Houston. We are advised that the Wasp should be in the area in approximately 60 minutes. Some times - the spacecraft 6 reached 50,000 feet at 23 minutes, 5 seconds after the hour; main chute went out at 24 minutes, 48 seconds after the hour; splash time 29 minutes, 09 seconds. This is Gemini Control Houston, standing by.

This is Gemini Control Houston. One of the search helicopters designated "Search II" is in voice contact with 6. We have no report yet on the conditions aboard.

This is Gemini Control Houston. Search II helicopter, a big HC-97 is hovering over 6. They have them in sight, they are talking with them and the Wasp now is something on the order of 15 miles from the scene.

This is Gemini Control. The parachute from 6 is still afloat. The initial voice report from 6 is "we're in great shape, we're in great shape." And now simmers are in the water, they have left the helicopter and are in the water.

Flight Director Chris Kraft has just advised that apparently our impact prediction that we have been going with earlier was incorrect, we have additional radar data from Grand Turk now being analyzed which shows the landing took place 12 miles downrange from the Wasp instead of 30 to 35 miles uprange as we earlier reported. This is based on the latest data coming to us via Grand Turk. A 12 mile overshoot is what it looks like right now.

The Wasp advises that the spacecraft is 11 to 12 miles ahead of them, they are proceeding on a southeasterly course and they as yet have had no visual contact from the Wasp. Helicopters are on the scene and have 6 in sight, of course are communicating with it. We cannot monitor the communications here, however,

A report from the Wasp - they estimate they will be alongside the spacecraft in 20 minutes. Twenty minutes from now. The time is 42 minutes after the hour.

We have been advised that the 6 pilots have requested that they remain in the spacecraft and they are to be hoisted aboard the carrier while still inside the spacecraft.

This is Gemini Control Houston. Another report on the status. The 6 pilots are relaying that they are in fine shape, fine shape.

END OF TAPE

This Gemini Control Houston, the Wasp is now about 2½ miles from the spacecraft. They're maneuvering down wind from it to be in a proper position for pickup. From the Wasp they estimate it will be 15 to 20 minutes before they begin the pickup maneuver. Schirra and Stafford both graduates of the United States Naval Academy, electing to come aboard in the traditional Navy way.

This is Gemini Control Houston. We're advised from the deck of the Wasp that the port hatch from spacecraft Gemini 6 has been opened. It is open right now. We have no report of anybody standing up or not. But that left hatch has been opened, that would be Wally Schirra's side. This is Gemini Control.

This is Gemini Control Houston. We're advised that the left hatch, Wally Schirra's hatch, will be closed before the hoisting maneuver begins. This is a safety precaution should anything happen. And should the 6 get dunked but it has been opened now for a few minutes This is Gemini Control Houston.

END OF TAPE

This is Gemini Control Houston. We are advised now that the collar is firmly attached around the Gemini 6 spacecraft. This is Gemini Control Houston. The swimmers have inflated the collar around the spacecraft. They have plugged into the external communications socket, they have conversed with the Pilots and they confirm everythings fine aboard Gemini 6.

END OF TAPE

This is Gemini Control Houston. We're 285 hours, 12 minutes into that other mission. The flight of Gemini 7. During the past hour, many of the flight controllers here in the Control Center, along with millions of others, have been looking at that extraordinary television picture from down range of getting what we would call an eyeball report on the status of Wally Schirra and Tom Stafford. Attention also is centered in the last hour looking into that thruster problem reported by 7 just minutes before 6 went into their retrofire. The crew has reported that the thruster problem was noted this morning after they awoke and when they began to damp out their rates which had built up over night. It's thrusters number 3 and 4. These are the yaw right thrusters. We also are noting some similarity of conditions at the fuel level and so forth when a similar problem developed in Gemini 5. We cannot draw any exact correlation yet, but there is certain similarities to the conditions that existed in 5 when late in that flight they lost their number 7 and 8 thrusters. This is Gemini Control Houston at 285 hours, 13 minutes into the flight of Gemini 7.

END OF TAPE

This is Gemini Control Houston, 285 hours 23 minutes into the flight. We've been advised in the last few minutes by the Flight Director that another record will go into the record book on this flight, that it will be a record of 20 hours 22 minutes for two manned spacecraft remaining within 100 kilometers of each other. The time on that again 20 hours 22 minutes. We are in a pass across the United States right now. Let's take that pass from the start.

Flight Hawaii.

Hawaii Hawaii.

Flight It looks like the temperature started down before we -- he noticed the failure.

Hawaii It looks like it started at Carnarvon.

Flight That's right.

Hawaii And we have one idea, we set the G and C at a point that started down on the dark side and he might have lost the heater and that's why I was asking about the thrusters. If it is so, he was tracking 6 BEF and they are on the cold side like we just found out they are, the chances are these would be the first two to freeze.

Flight Roger. We have redundant heaters on that thing, you know.

Hawaii We knew that Flight, but I'm beginning to wonder about heaters. Is that circuit breaker open or closed at this time.

Flight I'm pretty sure it is closed, but stand by, we are going to talk to him from California here.

Hawaii Roger, we'll stand by.

AFD Guaymas, AFD.

Guaymas Roger.

AFD Okay, we are set up to remote through California.

Guaymas Roger, I understand.

AFD Okay, you monitor the TM on the ground please.

Guaymas Roger, will do.

HOU CAP COM Gemini 7, Houston Cap Com, how do you read?

S/C 7 Loud and clear Houston.

HOU CAP COM Could you give us an open circuit voltage on 2 Alpha and 2 Charlie?

S/C 7 2 Charlie is 31 volts, 2 Alpha is 30.2.

HOU CAP COM Roger.

S/C 7 2 Alpha has been off the line for over an hour, Elliot.

HOU CAP COM Roger, 7. We plan to put 2 Charlie back on the line at Texas acquisition. We'll call you on that.

S/C 7 Roger, it's been on 2 minutes and 40 seconds.

HOU CAP COM Roger. I'll give you some flight plan updates here and then we'll probably be discussing your OAMS problem with you further. We have nothing at the present time, nothing further to discuss with you but we will have very quickly I am sure.

S/C 7 One of the items the booster folks were mentioning, is these were the two thrusters we used on most of the time to turn out the venting.

HOU CAP Roger we are aware of that. Let me know when you're ready to copy your update.

S/C 7 Go ahead, Elliot.

HOU CAP COM Okay, I have an Apollo here I doubt if you'll be able to get it because of no attitude control. I'll give it to you just in case. 285 23 48. Sequence 10, mode 01, pitch 30 degrees down, yaw 9 degrees right. Stand by 7. Gemini 7, have you opened the three and four circuit breakers yet? If not we would like them open at this time to observe any possible change in temperatures. We note that there is a definite temperature problem there.

S/C 7 We have opened them and they're closed now, do you want them opened again?

HOU CAP COM Roger. Open them and we'll watch it across the states.

C 7 Three and four are open.

HOU CAP COM Roger.

HOU Texas remote, California local.

HOU CAP COM Seven, we might as well go ahead with this flight plan update.

S/C 7 Go ahead.

HOU CAP COM 285 30 00 - exercise and eat period; 287 00 00 - bio-med recorder number one continuous; 287 10 00 - crew status report on the command pilot and purge fuel cells at the RKV. Copy so far?

S/C 7 Yes.

HOU CAP COM Okay, now I have three dim lights again, you wouldn't be able to do them without attitude control but we'll give them to you just in case. Dim light 287 30 00, sequence 03, mode 01. This is post sunset and we have a comment with that, it says

"Do not go beyond 40 frames on high speed black and white magazine." Do you copy?

S/C 7 Roger.

HOU CAP COM Dim light 287 45 00, sequence 03, mode 03, south horizon use 120 second exposure time in place of 10 seconds. Dim lights 288 00 00, sequence 03, mode 05, pre sunrise start time is 3 minutes prior to sunrise. Do you copy?

S/C 7 Roger.

HOU CAP COM Stand by, Gemini 7, Houston, would you give us a 2 Charlie open circuit voltage?

S/C 7 2 Charlie reads 81.1 volts.

HOU CAP COM Roger, would you put it back on the line at this time?

S/C 7 Roger, put it back on the line.

HOU CAP COM Roger, and could you give us a current reading?

S/C 7 2 Charlie reads just above one amp.

HOU CAP COM Roger, and 2 Baker?

S/C 7 2 Baker is reading about 3½.

HOU CAP COM Roger.

Gemini 7, Houston, would you take 2 Charlie back off the line at this time?

S/C 7 2 Charlie is back off the line.

HOU CAP COM Roger. Give us propellant quantity reading, Gemini 7.

S/C 7 Roger. 9 percent.

HOU CAP COM Roger. 9 percent. OK, 7, we'll continue with our flight plan update. 288 13 00, crew status report on the pilot at Hawaii, 288 25 00, flight plan report, 289 00 00, bio-med recorder No. 1 off, dim light, 289 04 30, sequence 02, clouds, no moon, MSC-4, 289 51 39, sequence 05, mode 01,

pitch 30 degrees down, yaw 18 degrees right, switch to mode 03 when acquired, 290 21 00, PLA update at RKV, 291 06 00, purge fuel cells at CSQ, 291 06 00, bio-med recorder No. 2 continuous. Do you copy?

S/C 7 Roger. Elliot, how much longer do you want to stay these circuit breakers off on the 3 and 4?

HOU CAP COM We're monitoring the temperature now. We'll call you in a minute.

S/C 7 OK.

HOU CAP COM Do you need them right now?

S/C 7 I have to keep my attitude control so we don't get any big rates. If we can catch them when they're small, we still have enough to stop them.

HOU CAP COM OK. We'd like to watch them just a minute more here.

S/C 7 It's no problem now. Also, I don't think it would be possible to track anything with the situation we're in now.

HOU CAP COM Roger. We understand that. Gemini 7, would you give us another readout on 2 Able and 2 Charlie?

S/C 7 Two Able reads 30.2 volts. Two Charlie reads 30.9 volts.

HOU CAP COM Roger. We'd like to put them back on the line at this time, and then turn the power switch off to take the entire section off the line at this time. You'll need your control circuit breaker for that.

S/C 7 Roger. Two Able and two Charlie coming back on the line and the power switch to off.

HOU CAP COM Roger, 7.

S/C 7 All accomplished.

Cap Com Roger, and your circuit breaker back off, of course.

S/C 7 Roger, Antigua. 7, we show your number 3 thruster temperature coming up now. We'd like to leave the circuit breakers open for a little bit longer here.

S/C 7 Roger. We are trying to keep it oriented into the sun as much as we can.

Cap Com Roger, do you think you could go for a rev without those breakers. We'd like to keep them open that long if you can manage that long.

S/C 7 Well we can, we'll be drifting and it will be tough to stop it, but we'll go ahead and do it.

Cap Com Okay, very good. Gemini 7, do you have any reason to believe that the water boiler is still venting at this time.

S/C 7 Negative.

Cap Com Roger. And of course, if you have need for these thrusters you are free to put them back on. But we would like to leave them off for a full rev, if you can manage it.

S/C 7 Okay, the only thing we need them for is if we just get too big a drift rate.

Cap Com Roger.

S/C 7 I'd like to save some extra fuel so that even with this limited authority we can align the platform with the OAMS.

S/C 7 Rog, Frank. 7, did you observe the adapter from 6 after separation and how did it travel in respect to you after they jettisoned it.

S/C 7 We didn't even see 6 retrofire. We were drifting very badly and when we tried to stop it we found we didn't have any authority and it took a long time to get stopped.

Cap Com Roger. So you did not see any of their retro or reentry?

S/C 7 That is affirmative.

Cap Com Roger. 7, do you still copy Houston.

S/C 7 Roger, go ahead.

Cap Com Okay, I'd like some information here on your cockpit setup as far as unsuited operation. Could you tell me your hose locations again briefly on the red and blue hoses.

S/C 7 Each red hose, which is our suit outlet hose is located in the by pass stowed position with the screen on. Each blue hose, the inlet hose, is velcroed to the -- (faded out)

Cap Com On the outside of the seat, or inside of the seat that would be, wouldn't it.

S/C 7 Roger, it is pointed aft and is velcroed on the inside of each seat.

Cap Com Pointing aft. Okay, and your suit flow valve positions.

S/C 7 Full cold on the suit flow valve.

Cap Com No, the flow valves.

S/C 7 Full flow on the suit control flow valve

Cap Com Roger, full flow on both. Cabin heat exchanger coolant flow setting.

S/C Full cold and both suit flows are full increase.

Cap Com 7, check that again now. I think you mean the suit flow setting is full cold and the cabin flow setting is full hot.

S/C 7 Roger, that's affirmed. You cut out on us on the cabin flow, I'm sorry.

Cap Com Okay, recirc valve position.

S/C 7 Recirc to the 45 degree position.

S/C 7 However, we had been flying with it in the full closed position.

Cap Com Roger. Okay, one or two suit fans.

S/C 7 One.

Cap Com Understand, one suit fan. And A or B pumps?

S/C 7 B pump.

Cap Com Roger, and I assume you find this is a comfortable setting.

S/C 7 A little chilly right now, as a matter of fact.

END OF TAPE

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

HOUSTON Gemini 6, Gemini 6, Houston Cap Com. How do you read?

S/C 6 This is Gemini 6. Loud and clear.

HOUSTON Roger. Can you confirm TR minus 4 plus 16, check list complete?

S/C 6 Affirmative.

HOUSTON Roger. Standing by for count down.

S/C 6 ...(Garble)...

HOUSTON We didn't copy that, 6. 60 seconds. Mark one minute. That was one minute to retro-fire.

S/C 6 ...(Garble)...

HOUSTON 30 seconds. 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, retro-fire.

S/C 6 We've retro-fired.

HOUSTON Roger, 6.

S/C 6 We have an IVI of 309 aft....(Garble)...

HOUSTON Understand 309 aft and 1 right. Say again down.

S/C 6 116.

HOUSTON 116, Roger.

S/C 6 ...(Garble)...

HOUSTON Say again, 6. Say again, 6.

S/C 6 Roger. ...(Garble)...

HAW Hawaii has acquisition, Gemini 6.

HOUSTON Canton go local.

CTN Roger.

HAW Gemini 6, Hawaii Cap Com.

S/C 6 Go ahead, Hawaii

HAW Okay. Give me your attitudes on retro-fire.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

S/C 6 Tight as a drum as far as I can tell.

HAW Okay. All four retros manual or auto?

S/C 6 All auto. And, held within one foot per second, a nominal.

HAW Very good. Advise retro-jet.

S/C 6 Roger. Hawaii, we're on plane and in re-entry attitude now.

HAW Roger. You're looking real good here on the ground.

S/C 6 Roger.

HAW Radar check at Hawaii.

HOUSTON Roger.

HAW Gemini 6, I'll give you a time mark to start your event timer counting up to plus 3 minutes in about 15 seconds.

S/C 6 Roger. I'll see if I can read it.

HAW 5, 4, 3, 2, 1, mark.

S/C 6 Roger.

HAW Okay. You all squared away?

S/C 6 All set here. Thank you.

HAW Okay. Did you get retro-jet?

S/C 6 That's affirmative. I called that out. I guess I had no hack time at that point.

HAW Okay. Very good.

S/C 6 Let's go to recover.

HAW Roger. Flight, Hawaii.

HOUSTON Go ahead.

HAW Copy all that?

HOUSTON Affirmative.

HAW Okay. RCS is looking real fine.

S/C 6 It sure is.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

HAW Secondary O2 and your main bus are looking real good.

S/C 6 Roger. This bird's been a beauty all the way.

HAW You're headed for a good deep thrust command.

S/C 6 Sorry I can't try the Pacific this trip. I'm going for the Atlantic.

HAW Roger. Seven, Hawaii.

S/C 7 Go ahead, Hawaii. This is 7.

HAW Okay. We're showing you real good here on the ground except for 2A, which is off.

S/C 7 Except for what?

HAW Except for stack 2A. We're showing that as off. Is that affirmed?

S/C 7 That's affirmed. And, we're loosing our thrusters also. Thrusters 3 and 4 are gone.

HAW Roger. What time?

S/C 7 Let's see...5 minutes ago.

HAW Roger.

S/C 6 Feeling the drift off, Frank and Jim. We'll see you on the Beach.

S/C 7 Okay, Wally.

S/C 6 Did you get a chance to see us on that retro-fire?

S/C 7 We can't get a picture of you because we don't have any thrusters now.

S/C 6 Roger. Did you get a chance to see it, though?

S/C 7 No.

S/C 6 Okay.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

HAW	Flight, Hawaii.
HOUSTON	We copy.
HAW	Okay.
HOUSTON	Hawaii. Spacecraft 6 arrives and will be lit at 400K.
HAW	Roger. Six, Hawaii.
S/C 6	Go ahead, Hawaii.
HAW	Okay. Your horizon will be lit at 400K.
S/C 6	Roger. Do you have that time for a 400K?
HAW	400K. 20 plus 15.
S/C 6	That's what we have also. Thank you.
HAW	Okay.
S/C 6	Reverse burn 26 plus 38.
HAW	That's affirmed.
S/C 6	Very good.
HAW	It looks real good, 6.
S/C 6	Roger.
HAW	Flight, Hawaii. Both astronauts look well. We could not remote data for 6.
HOUSTON	Roger.
HAW	Six, Hawaii. We have nothing further. W'll be seeing you.
S/C 6	Roger, Hawaii. Thanks again.
HAW	Roger. Seven, Hawaii. We'll be standing by. We'll see you next rev.
S/C 7	Roger.
HAW	Got some RCS read outs for you, Flight.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

HOUSTON Go ahead.

HAW Ring Alpha 2260. Ring Baker 2360.

HOUSTON Roger.

HAW And the regulator pressure's holding right at 300. It's been looking real good, Flight. Telemetry LOS on Gemini 6 at Hawaii. Gemini 7. And radar LOS.

HOUSTON California go remote.

CALIFORNIA California is remote.

HOUSTON Gemini 6, Houston. How do you read?

S/C 6 Gemini 6. Reading loud and clear.

HOUSTON Roger. We have no further update on your 400K time at this point.

/C 6 Roger, Elliot.

HOUSTON Looking real good, Wally. The computer solution looks real good from here.

S/C 6 Very good.

HOUSTON Gemini 7, Houston. How do you read?

S/C 7 Loud and clear.

HOUSTON Roger. Are you having any attitude control problem with those 2 thrusters out?

S/C 7 Roger. We're trying to control it by pitching and rolling.

HOUSTON Roger. We'll be with you shortly.

S/C 7 Understand. Also, I've got 2A off the line for good, Elliot.

HOUSTON Roger, Frank. Texas remote. California local.

TEXAS Texas remote. Six.

/C 6 We have good horizon.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

HOUSTON Roger. Horizon. Gemini 6, your 400K time is good.

S/C 6 Roger.

HOUSTON Gemini 5 says the elevator is lowered.

S/C 6 Roger. ...(Garble)...

HOUSTON Gemini 6, Houston. Have an update on your RET RB.

S/C 6 Roger, Houston. Go ahead.

HOUSTON RET RB 26 plus 39. Roll left 47, roll right 47. Initial needle deflection shows a 12 mile overshoot.

S/C 6 Roger. RET RB 26 plus 39. Roll left 47 degrees. Roll right 47. Initial needle shows 12 miles over.

HOUSTON Roger. Gemini 6. That was RET RB. Did you copy that?

S/C 6 Roger. RET RB 26 plus 39.

HOUSTON Roger. Gemini 7, Houston. How do you read?

S/C 7 Loud and clear.

HOUSTON Roger. Six is in black out now. Are you able to see the re-entry?

S/C 7 No. We don't have any attitude control, Elliot. We're just drifting.

HOUSTON Roger. Gemini 7, Houston. We'd like a brief comment on you here while we're in black out with 6 as to whether both of those thrusters failed at the same time.

S/C 7 That's roger. I'm not getting any roll. Just no yaw. We can hear the solenoids closing.

HOUSTON Roger. Have you started through some of your trouble shooting procedures yet, or are you waiting to talk?

S/C 7 We're starting ourselves through some of our cells, but we didn't want to say anything until 6 gets in.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

HOUSTON Roger. We'll be with you shortly.

GRAND TURK Acquisition, Grand Turk, on 6.

HOUSTON Gemini 6, Houston. How do you read?

S/C 6 We read loud and clear.

HOUSTON Roger. We read you out of black out.

S/C 6 Okay. Stand by. We...(Garble)...

WASP Gemini 6, this is...(Garble)... I have you on radar; tracking you at in at 43 miles. Over.

S/C 6 Roger.

HOUSTON Roger. We have radar contact on you from the carrier, Gemini 6.

S/C 6 Roger. Are we being followed?

HOUSTON Roger. They're expecting you.

S/C 6 Roger. I see a good landing place.

NAVY A/C Gemini 6. This is Red Flightleader and we..(Garble).. Over.

S/C 6 Roger. We say you off..(Garble)..

HOUSTON Gemini 6. We have your drogue time as 29 plus 45; main time as 31 plus 06.

S/C 6 29 plus 45.

NAVY A/C Air Boss, this is Red Flight Leader. Would you report any contact with Gemini 6. Over.

NAVY A/C Gemini 6, Gemini 6, Air Boss. Over.

S/C 6 Drogue is out.

HOUSTON Roger. Drogue. Gemini 6. How did the re-entry look on the gauges? Gemini 6, Houston. Can you give us a read out as to how the re-entry looked on the needles?

NAVY A/C Red Flight Leader, we cannot communicate with Gemini 6. Over.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

HOUSTON This is Houston. Go ahead, 6.

NAVY A/C Red Flight Leader. We hold his splash point at 279 degrees, 3½ miles. Do you concur?

NAVY A/C ...(Garble)... spot now. About 2 miles further out.

NAVY A/C Roger. Understand. Do you have them in sight? Over.

NAVY A/C Negative. Not at this time.

NAVY A/C Roger.

S/C 6 Hello...(Garble)... This is Gemini 6 transmitting in the black. How do you read?

HOUSTON Houston reads you, Gemini 6. Can you confirm main?

NAVY A/C Gemini 6. This is Red Flight Leader.

Roger. We are reading you. We believe you are 3 miles away. We are on the way, over.

S/C 6 I hope so..(Garble)...

NAVY A/C Do you read, 6? This is Red Leader. Could you give us your altitude? Over.

S/C 6 Okay. 2000 feet. We were traveling about 35 feet per second.

NAVY A/C This is Red Flight Leader. I read you as 2000 feet.

S/C 6 That's about it. ...(Garble)..feet. 30 feet per second.

NAVY A/C Gemini 6 1:00 o'clock. Rate 30 feet per second.

S/C 6 Roger. Right on it.

NAVY A/C Red Flight Leader. Can you see Gemini 6? Over.

NAVY A/C Air Boss, that's a negative. I do not see Gemini 6. What's the latest on him? Over.

NAVY A/C 2-1-30, over.

NAVY A/C Gemini 6, Red Flight Leader. How do you read? Over. Gemini 6, radio check, over.

NAVY A/C Air Boss 1. Red Flight Leader, do you read Gemini 6? Over.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

NAVY A/C — Air Boss 1, negative. Break. Gemini 6, Gemini 6, stand by for one, over.

HOUSTON — Gemini 7, Houston. How do you read. Gemini 7, Gemini 7, Houston. How do you read? Gemini 7, Gemini 7, Houston Cap Com. How do you read? Gemini 7, Gemini 7, Houston Cap Com. How do you read?

S/C 6 — This is Gemini 6. Over.

NAVY A/C — Roger. You're in fine shape. We'll have you aboard shortly.

SEARCH 2 — Red Flight Leader, Search 2. Gemini 6 states they are in fine shape; request to come aboard WASP if WASP will arrive soon. Over.

NAVY A/C — Red Leader. Roger. Out.

AIR BOSS — Search 3, Air Boss. Understand you have the R & R package. Is that affirmed? Gemini 6, Gemini 6, Air Boss 1. Radio check. Over.

RED LEADER — Search 2. Red Flight Leader, request a status report on the spacecraft. Over.

SEARCH 2 — Red Flight Leader, Search 2. Roger. At the present time, Search 3 is hovering close by Gemini 6. The spacecraft is floating with a very small amount of rolling. The antenna is erected. And everything looks okay. Over.

RED LEADER — Roger.

SEARCH 2 — Red Flight Leader this is Search 2. Search 3 has now a rescue swimmer in the water who is proceeding at this time towards the spacecraft.

RED LEADER — This is Red Flight Leader. When in contact, inform Gemini 6 that the WASP will be along side at 1200. They're now only 20 minutes from our rescue area. Over.

AIR BOSS — Roger. Advise along side at 1200. Over.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

S/C 6 ...(Garble)...to be hoisted aboard.

RED LEADER Red Flight Leader. Roger. We will prepare to hoist you aboard in the spacecraft.

S/C 6 Gemini 6. Thank's a lot.

AIR BOSS Search 3, Air Boss 1. You'd better check on that one swimmer you put in the water back there. Over.

SEARCH 3 This is Search 3. He's in the raft. He's doing fine. He's got the parachute tied onto the raft, and the other 2 swimmers are... (garble)...

AIR BOSS Air Boss 1. Understand. Have the parachute and R & R package secured. Over.

SEARCH 3 Search 3. Roger.

AIR BOSS Red Flight Leader, this is Air Boss 1. The swim aircraft are now 270. It'll be about 15 or 20 minutes before they're...correction about 10 minutes before they're over the spacecraft. Over.

RED LEADER Roger. Red Flight Leader. Out.

AIR BOSS Swim 1 and Swim 2, stand by for tone for ...(garble)... to the spacecraft. Over.

RED LEADER This is Red Flight Leader. The spacecraft will not be hoisted aboard until the collar is attached.

AIR BOSS Air Boss 1. Understand.

SEARCH 3 Air Boss 1, Search 3.

AIR BOSS Air Bossl, over.

SEARCH 3 We have a collar aboard; if you'd like us to pick up our two swimmers and take them over there and they'll put the collar on.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

IR BOSS — This is Air Boss 1. Negative. The spacecraft is riding...seems to be riding allright. Let's wait another 10 minutes or so.

SEARCH 3 — Roger.

AIR BOSS — Red Flight Leader, Air Boss 1. Over.

RED LEADER — Red Leader, over.

AIR BOSS — Roger. Have reason to believe that the main chute did not jettison from the spacecraft. Will advise. Over.

RED LEADER — Roger. Out.

AIR BOSS — Gemini 6, Gemini 6, Air Boss 1. Over.

S/C 6 — Roger, Air Boss. I think you may be right.

AIR BOSS — Roger. Looks like it's still attached, Gemini 6. We may have to disengage it prior to taking you aboard. Understand you do want to stay in the spacecraft and be hoisted aboard WASP. Is that affirmed?

S/C 6 — Yes. That's affirmed.

AIR BOSS — Information, Gemini 6. The WASP is now about 9 miles to the north of us.

HOUSTON — Tananarive go remote.

TAN — Tananarive remote.

HOUSTON — Gemini 7, Gemini 7, Houston. How do you read?

S/C 7 — Go ahead, Houston. You're loud and clear.

HOUSTON — Roger. Gemini 7, Houston. Gemini 6 is down safely. Approximately 11 or 12 miles from the WASP. The WASP is proceeding to pick them up. Can you confirm your auxiliary heater on and your OAMS heater circuit breaker on?

S/C 7 — Stand by. Roger. Both on.

HOUSTON — Roger, 7. And, can you explain anything further to us at this time on your attitude control?

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

S/C 7 Roger. Three and four are not igniting properly. We have been able to get a little bit out of them indirectly. Still some fuel and oxidizer being spurted out.

HOUSTON Roger, 7. Have you checked them individually, and you can confirm that they're both doing the same thing? Gemini 7, Houston. Did you copy? Gemini 7, Houston. Do you read?

S/C 7 Roge. We can hear the solenoids clicking, but no reaction.

HOUSTON Roger. And you've confirmed that this is the same on each one separately? Gemini 7, Houston. How do you read? Carnarvon, Houston Flight.

CRO Carnarvon, Flight. Go ahead.

HOUSTON You have that star reference for Spacecraft 7?

CRO That's affirmative.

HOUSTON Tell him that we're not concerned about him doing MSC 4 if he doesn't think he can do the attitude that..uh..not to worry about it. Forget it.

CRO You want me to pass this star reference data?

HOUSTON Yes. You might ask him how he feels about MSC 4 experiment before.. about attempting it...before you give it to him. Carnarvon, Houston Flight.

CRO Go ahead, Flight.

HOUSTON Did you copy all the recovery information on the Spacecraft 6?

CRO Well the last message I had said that he was in the water;that they had the R&R section secured and they were estimating pick up at 1600 which should be right about now.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

HOUSTON Yea. Well, they're just a few miles from the carrier at the moment, and the collar has been inflated. We're not sure the chute is disconnected; but other than that, everything looks okay. They're going to bring them aboard the carrier without them getting out.

CRO How far did they miss that target point?

HOUSTON It looks like they were 12 to 15 miles down range, and to the right of the carrier.

CRO A lot better than any of the past ones, huh?

HOUSTON That's affirmative.

CRO Flight, Carnarvon. Do you know whether they've reconfigured the bird?

HOUSTON We don't think they have, because of their flight plan; and we want you to do it; because we've scrubbed the experiment.

CRO Roger.

HOUSTON By the way, that IT for more information was 2 miles long and 11 miles to the right.

CRO Boy. That sounds real good. Gemini 7, Carnarvon Cap Com.

S/C 7 Go ahead, Carnarvon. Gemini 7.

CRO Roger. We have a little information for you about 6. He's just a few miles from the carrier. They will bring them aboard in the spacecraft. And, everything is secure. Everything is looking real good.

S/C 7 Very fine. Did you get any word about our OAMS problem?

CRO Roger. Understand you lost 2 thrusters.

S/C 7 Roger. We're also now picking up about 2 amps spike on our main bus voltage every 9 seconds. It's exactly 9 seconds and it's about a 2 amp spike.

*Not aired air/ground pass over CTN, HAW, CDL, TEX, CRO

CRO Roger. Copy. Flight, did you copy?

HOUSTON Carnarvon, have him try turning off his OAMS heater circuit breaker to see if the spiking stops and then put it back on again.

CRO Gemini 7, would you try turning off your OAMS heater circuit breaker to see if it stops the spiking and after you have it off for a short time put it back on.

S/C 7 Roger. Negative. It did not stop it.

CRO Roger.

FLIGHT Tell him we'll think about it a while and come back at him as soon as we have any kind of a solution.

CRO We've got a bunch of experts back there at Houston and they're looking into this thing and as soon as they come up with anything they'll sure let you know.

S/C 7 Okay.

FLIGHT What mode was he in when the TCA's failed and what has he checked?

CRO Gemini 7, Carnarvon Cap Com. What mode were you in when the thruster failed and what have you checked so far?

S/C 7 We were in the pulse mode and we've checked the individual thrusters, we've checked direct, and we've established that we can maintain attitude control but with very poor efficiency, by blowing whatever it is that's coming out of there, either oxidizer or fuel. And we can hear ..... pushing.

CRO You say you can hear ..... clicking?

S/C 7 Roger.

FLIGHT What was that final thing he said he had checked?